Deliverable 5 : legal impacts of the integration of new technologies in transport systems

de Villenfagne, Florence; Lerouge, Jean-Francois; Dhondt, Jan; Rolin Jacquemyns, Laetitia; Toint, Philippe; De Streel, Alexandre; Poullet, Yves

Publication date:
1999

Document Version
Publisher's PDF, also known as Version of record

Deliverable D5

"Legal impacts of the integration of new technologies in transport systems"

Restricted

TRANSINPOL

Contract ST-96-AM-1152

Project Co-ordinator: France Développement Conseil (FDC)

Partners:
Northern Lighthouse Board
PLS Consult
TNO-Inro
FUNDP
Directoraat Generaal Rijkswaterstaat
Technum Flanders Engineering
Sema Group
Telematica
VBB
Fraunhofer-ISI

Date: 20 October 1999

PROJECT FUNDED BY THE EUROPEAN COMMISSION UNDER THE TRANSPORT RTD PROGRAMME OF THE 4th FRAMEWORK PROGRAMME

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1. EXECUTIVE SUMMARY

The integration of the information technologies in the field of transport raises several legal questions. The choice of the legal questions developed in the present document is based on the analysis of different cases studies[1]. During the research it became clear that the four following aspects were of high interest when considering the integration of new technologies in transport: privacy, electronic payments, competition and liability. These four aspects are illustrated by cases studies on road tolling, traffic information, electronic ticketing, use of satellite based navigation systems.

In the privacy field, different legal questions appeared in the cases studies. An analysis of the European Directive on data protection[2] is developed to present the scope of application, the personal data possibly collected in transport services, the rights and obligations of the different parties (i.e. the data subject and the controller) and the possible applications of those dispositions in the field of transport. A specific attention was paid to the balance of interests that can exist between the public interests and the individual right to privacy.

In the electronic payments field, two particular instruments are analysed : the credit cards and the reloadable payment instruments. That choice is justified by the fact that those instruments are the most used for the moment in the field of transport and it appears that the projects in course keep that approach. The particular questions raised by the use of the credit card are mostly the problem of giving the evidence when that instrument is used in distance contracts. There are also difficulties in the case of loss or theft of the instrument and the consequent liability of the parties.
The questions raised by the use of the reloadable instruments are not the same, the attention is more focused on the possible threats to privacy caused by the storage on the smart card of information of different natures. Part of this information is related to payment, part is related to identification of the holder. The access to this information must be granted only to the relevant persons.

Even if it has been contested in the past, the application of competition law to the transport sector is nowadays certain[3]. This sector is characterised by a network architecture that consists of an infrastructure, most of the time non-duplicable, and several final services needing an access to the infrastructure to be provided. The goods transport services, for instance, need an access to the road, and the maritime ships need an access to harbours. Nowadays, as a lot of infrastructures are privatised and the services are liberalised, one of the most challenging question about the application of competition law to the transport sector consists in the guarantee of a fair access to the monopolised infrastructure for the service providers. To ensure this access, the essential facilities doctrine, based mainly on article 82 of the EC Treaty, has been developed. As this theory seems, most of the time, insufficient, the Council has adopted sector-specific regulation that imposes obligations to the infrastructure operators. For instance, in the airline sector, the Council has adopted a code of conduct for the computerised reservation systems or a Directive concerning the groundhandling services . The application of the new technologies in the transport sector does not raise very new questions in competition law and do not require a revolution in that field. Nevertheless, it could raise some new possibilities of anti-competitive conducts, which could justify some adaptations or, at least, new interpretations of the sector specific regulations.

Another legal point that has been approached in this report is the liability issue in case of damage caused by a satellite signal. The implementation of EGNOS and, thereafter, of GALILEO provides to

[1] See Annex I and II.
[2] Directive 95/46/EC of the European Parliament and the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data.
[3] M. WAELBROECK & A. FRAGNANI, *Commentaire Megret- le droit de la CE, V.4: Concurrence*, Bruxelles, Ed. Université de Bruxelles, 1997, n° 51; Joint Cases 209-213/84, *Ministère Public/Asjes (Nouvelles Frontières)* [1986] ECR 1425.

Europe an important position in the Global Navigation Satellite System (GNSS) and would have important economic repercussions. By the development of this system, Europe will be in competition with the USA and its GPS. GALILEO's success shall come from its adequate answer to the users expectations, i.e. *inter alia* a guaranteed security, availability and accuracy of the system. The need for a liability framework thus really exists. We concluded in this report that, today, neither an international Treaty, nor a European Directive were able to face the liability issue we are dealing with. An ideal solution would therefore be the adoption of a new Directive tackling the GALILEO problems and particularly the liability question. This European action should be in conformity with article 5 (ex-article 3 B) of the Treaty establishing the European community[4]. The international applications of GALILEO and the existence of different points of view concerning the notion of *fault* in the Member States, seem to answer to the requirements of this article and allow a Community action. In order to simplify the procedure, the core of the liability framework could be the liability of the Vehicle Company and the Program Management Board.

After the analysis of each legal subject, several proposals of policy options are made to indicate to the reader some possible actions to solve problems highlighted during the research.

[4] *"in areas which do not fall within its exclusive competence, the Community shall take action, in accordance with the principle of subsidiarity, only if and in so far as the objectives of the proposed action cannot be sufficiently achieved by the Member States and can therefore, by reason of the scale or effects of the proposed action, be better achieved by the Community".*

2. FOREWORD

This report is the final deliverable of work package 5 on "Legal issues" of the TRANSINPOL project. The report assesses the impacts of the integration of information, communication, navigation and payment technologies in transport.

The presentation of legal issues in the field of transport can hardly be done without taking into account the practical aspects of the subject. It is why it was decided to start the analysis with cases studies. Those cases are presented *in extenso* in Annex I and II. From the investigations required by the cases, we came to several findings, conclusions and suggestions formulated in terms of "policy options". The purpose of this document is to present the different elements extracted from the cases and to provide some guidelines to read the Annexes.

Given the broad scope and diversity of the legal questions, the research has voluntarily been concentrated on aspects representing the major legal aspects : protection of privacy with regards to the processing of personal data, electronic payments, competition and liability.
Those subjects have been chosen because they seem to raise the most urgent and new questions in the field of transport. In all fields implying technologies, privacy is regarded as a major issue because the possibility to collect data in highly efficient way creates risks of threats to privacy. The electronic payments represent a possibility for the transport service providers to increase the speed of execution for the application they put in place. An analysis of the legal questions could show the most adapted instruments according to the possible problems they could generate. The question of competition has been chosen because it is more and more question to open completely some markets. Moreover, the application of the essential facilities doctrine can provide some elements to solve the competition problems encountered by new entrants in recently opened markets. Finally, the decision of the European Union to start the GALILEO experience justified the analysis of the liability questions that could raise when the system would be operational.

For each subject, it is made reference to the relevant case studies in order to offer to the reader the possibility to obtain a deeper analysis of the question[5]. We strongly recommend the reading of the Annexes for a better understanding of the legal developments presented.
Finally a conclusion will present a summary of the different policy options generated by the elaboration of this report.

[5] This document has been realised thanks to the contribution of Alexandre de Streel (competition), Florence de Villenfagne (liability in the GNSS applications), Jan Dhont (protection of privacy with regards to the introduction of GNSS), Jean-François Lerouge (protection of privacy and electronic payments) and Laetitia Rolin Jacquemyns (electronic payments and evidence) of the Centre de Recherches Informatique et Droit, FUNDP, Namur, Belgium, under the supervision of Professors Yves Poullet and Philippe Toint of the FUNDP.

3. PROTECTION OF PRIVACY WITH REGARDS TO THE PROCESSING OF PERSONAL DATA

Regarding the increasing phenomenon of congestion, there is a constant wish from the public authorities to create systems that will curb the demand for private transport. The privacy issues that could raise while using those systems were of particular interest.
In the Annex[6] we used the example of the road tolling but it is not the only instrument with traffic management purposes, the use of GNSS[7] could be another one. In fact, three main questions are asked: what kinds of personal data are collected? Who can be considered as the controller? And what are the data subject's rights?

3.1. FIELD OF APPLICATION

Article 3 (1) of the Directive states that "this directive shall apply to the processing of personal data wholly or partly by automatic means, and to the processing otherwise than by automatic means of personal data which form part of a filing system."

Processing of personal data is defined very broadly and means "any operation or set of operations which is performed upon personal data, whether or not by automatic means, such as collection, recording, organisation, storage, adaptation or alteration, retrieval, consultation, use, disclosure by transmission, dissemination or otherwise making available, alignment or combination, blocking, erasure or destruction".[8]
In the case of a navigation and positioning system it is clear that it will be in some cases about an automatic processing, because radio-waves and/or digital signals are used notably in the cases of Controlled Access Services[9]provided by Galileo and service providers.

[6] For a description of the system of road tolling and the questions on privacy see Jean-François LEROUGE, "Road tolling and privacy. Some comments with regards to the EC Directive on Data Protection", Annex I, pp. 51-73
[7] For an analysis of the questions of privacy related to the use of satellite navigation systems like GNSS see Jan DHONT, "GNSS-2 and privacy", Annex I, pp. 27-50.
[8] See article 2 (b) of the Data Protection Directive.
[9] Controlled Access Services-1 and 2 (CAS-1 &2): These categories include commercial services (CAS-1) and services that have implications for the safety-of-life(CAS-2). This last category includes also secure services that will be provided under the control of government or military agencies having no civil applications.

3.2. LEGAL QUESTIONS

3.2.1. WHAT CAN BE CONSIDERED AS PERSONAL DATA?

According to article 2a of the EC Directive on the protection of individuals with regard to the processing of personal data[10], 'personal data' shall mean "*any **information** relating to an identified or identifiable natural person ('data subject'); an identifiable person is one who can be identified, directly or indirectly, in particular by reference to an identification number or to one or more factors specific to his physical, physiological, mental, economic, cultural or social identity*". The concept of information is not further defined, therefore, there is no request for a particular kind of information, it can be a picture, a sound, a text or whatever.

In the context of the road tolling, two types of data are certainly collected : the data related to the person when he subscribes to the service (data collected *a priori*), and the data related to the vehicle that is collected during the current use of the system, like, for example, the plate number, the number of kilometres, the date and amount of the payment and eventually some data related to the payment instrument itself (serial number, expiration date,...).

In the context of traffic management applications using satellite positioning, it can be considered that the GNSS receiver ID number and the data generated by the GNSS system itself can be considered as personal data. The rules of the Directive can be applied even if the data are encoded[11].

3.2.2. WHO IS THE CONTROLLER AND WHAT ARE HIS/HER OBLIGATIONS?

According to article 2(d), the 'controller' means "*the natural or legal person, public authority, agency or any other body which, alone or jointly with others, determines the purposes and means of the processing of personal data; where the purposes and means of processing are determined by national or Community laws or regulations, the controller or the specific criteria for his nomination may be designated by national or Community law*". The interest for identifying the controller is justified by the fact that several obligations are levied onhim.

In road tolling, several actors can be considered as data controller : the systems operators, the bank of financial institution that is in charge of the payment system and the plate registration office because it could be asked to provide the needed information to make the link between a person and its plate number.
In the case of traffic management using satellite positioning, it is mostly the GNSS service provider that should be regarded as the controller and would be responsible for respecting the privacy rules. The obligations of the data controller are the following :

1. Obtaining the consent[12] of the data subject for the processing necessary for a specific purpose :

   ♦the consent is understood as any given indication of the subject wish, a freely given consent, a specific consent and an informed consent. In the particular case of GNSS, the principle of free consent should be particularly paid attention to. It is imaginable that standards are developed that would render the equipment at odds with the personal autonomy, e.g. by making it possible to continuously track a car for public security or other reasons. Plans are existing in the Netherlands to integrate a GNSS system in a road tolling program. It leaves no

[10] Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data, Official Journal L 281 , 23/11/1995 p. 0031 - 0050
[11] See Jan DHONT, op. cit. , Annex I, p. 31.
[12] See Jan DHONT, op. cit. , Annex I, p. 34.

many doubt that, in cases where the system can not be switched off as described here, the autonomy of the citizen is gravely endangered in this case and is at odds with the proportionality principle in art 8 ECHR[13].

♦The processing must be necessary for the performance of task carried out in the public interest or in the exercise of official authority vested in the controller.
In the case of the use of GNSS, the diverging interpretation of the notion of public interest may to some extent stiffen the freedom of mobility. E.g. scientific research may in some Member States be qualified as public interest though not in others. If one knows that a great margin of manoeuvre is left to the Member States in regulating the protection regime of personal data for scientific purposes, this could indirectly compromise the freedom to mobility. It is therefore recommendable to decide clearly at the supranational level what the legitimate purposes are within the scope of the public interest notion.

♦The processing must be necessary for the legitimate interests pursued by the controller or by third party or parties to whom the data are disclosed.

2. Collecting data for specified, explicit and legitimate purposes.
The evaluation of the legitimacy of a purpose involves in fact a balancing of the various interests and values that are at stake. The legitimacy of a purpose can thus never be evaluated *in abstracto*, though has to be put in the context. If for example, for State security reasons or taxation, the installation of GNSS-equipment that emits localisation and identification is made mandatory, it has to be scrutinised if the system does not, in a disproportionate way, encroach the right to privacy or hollows this right. If such a system was unconditionally introduced, it could never serve a legitimate purpose.

3. Collecting data that must be adequate, relevant and not excessive in relation to the purpose they are collected and/or further processed (compliance principle) for. For example, if a GNSS system is used for billing purposes, it is not necessary that the service provide tracks the driver constantly.

4. The data have to be conserved during a limited period.

5. Fair and lawful processing.
The compliance with the fair and lawful processing principle will be met when the controller takes all measures to guarantee the transparency and not to ambush the legitimate expectations of the data subject. A person's personal data cannot be processed by any hidden or secrete reasons. The data subject must be made aware of the uses of data relating to him, either when the data are collected, or when it is recorded, or when it is first disclosed.

6. No automated decision
According to article 15 (1) of the Directive, individuals have the right not to be subject to adverse decisions based solely on the automated processing of a defined personal profile. This provision is intended to prevent the use of sophisticated software systems for automated decisions about individuals without the actual input of human judgement.
In the context of application of the GNSS technology, one could imagine e.g. the perfect speed control by registering the speed limit transgressors and sending them automatically the bill. As far as no review of such an automated decision would be possible, this sort of application would necessitate a legal ground as mentioned in article 15(2)b of the Directive[14].

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[13] European Convention on Human Rights

[14] "*Subject to the other articles of this Directive, Member States shall provide that a person may be subjected to a decision of the kind referred to in paragraph 1 if that decision : (b) is authorised by a law which also lays down measures to safeguard the data subject's legitimate interests*".

3.2.3.WHAT ARE THE DATA SUBJECT'S RIGHTS?

Articles 10 and 12 of the Directive attribute several rights to the data subject :

The first one is the right to obtain information on the controller such as :
(a) the identity of the controller and of his representative, if any;
(b) the purposes of the processing for which the data are intended;
(c) any further information such as
- the recipients or categories of recipients of the data,
- whether replies to the questions are obligatory or voluntary, as well as the possible consequences of failure to reply,
- the existence of the right of access to and the right to rectify the data concerning him

in so far as such further information is necessary, having regard to the specific circumstances in which the data are collected, to guarantee fair processing in respect of the data subject.

Every data subject has the right to obtain from the controller:
(a) without constraint at reasonable intervals and without excessive delay or expense:
- confirmation as to whether or not data relating to him are being processed and information at least as to the purposes of the processing, the categories of data concerned, and the recipients or categories of recipients to whom the data are disclosed,
- communication to him in an intelligible form of the data undergoing processing and of any available information as to their source,
- knowledge of the logic involved in any automatic processing of data concerning him at least in the case of the automated decisions referred to in Article 15 (1);

(b) as appropriate the rectification, erasure or blocking of data the processing of which does not comply with the provisions of this Directive, in particular because of the incomplete or inaccurate nature of the data;
(c) notification to third parties to whom the data have been disclosed of any rectification, erasure or blocking carried out in compliance with (b), unless this proves impossible or involves a disproportionate effort.

Article 10 and 13 contain some exceptions and/or restrictions to the principle that the data subject should be informed about the future processing of his personal data. For what concerns positioning applications, the following seem to be relevant:

- If the data is processed for statistical purposes, for purposes of historical or scientific research; and this only as far as the provision of information proves impossible or would involve a disproportionate effort or if recording or disclosure is expressly laid down by law. Appropriate safeguards should however be foreseen by the Member States. In this case it is about a exception. We referred already to this hypothesis before.
- Restrictions could be made for reasons of (we only mention the pertinent one's):
  - (a)National security;
  - (c)Public security;
  - (d)The prevention, investigation, detection and prosecution of criminal offences, or of breaches of ethics for regulated professions;
  - (e)An important economic or financial interests of a Member State or of the E.U., including monetary, budgetary and taxation matters;
  - (f)A monitoring, inspection or regulatory function connected, even occasionally, with the exercise of official authority in cases referred to in (c), (d) and (e).

Again here, there will be many differences between the legislation of the various Member States as to the restrictions to the duty to inform. One could ask if the legitimate expectation of a data subject will not be frustrated with regard to the fair processing of his personal data when he travels from one country to another in the European Union. We think that the freedoms and legitimate expectations of

the European citizen would be better of with a *ius commune* in the sector of navigation and positioning services. If enough transparency is provided, the people will trust much more these services what would entail a stimulation of this market.

3.3. POLICY OPTIONS :

The following concrete policy options are not exhaustive because the applications to which navigation and positioning technology may lead are not fully known and are evolving continuously;

- In the Controlled Access services (commercial and safety of life services), billing systems should be introduced where the data subject can enjoy the service without being obliged to have his personal data processed (fixed price, unreloadable paycards).

- Due attention should be given to the free consent principle in the course of development of technical devices or at the moment of imposition of technical standards.

- Technical standards, as well as all the principles inscribed in the Directive that manifestly could lead to serious diversity of state legislation should be discussed at a common forum such as the Working Party.

- Processing for public interests reasons should only take place after weighing the public interests against the freedom of the citizen and reaching a proportionate balance. Processing of personal data for public interest reasons should be introduced by law and preferably by an Act of Parliament after democratic deliberation.

- Once a system is installed that allows the emission and processing of information, the temptation may be great to use the system for a multitude of finalities. Lines will have to be drawn between respect for substantive democratic values and efficiency.

- Processing should take place with respect of all the principles inscribed in the Directive: transparency and fair processing are the leading principles.

- When third parties have access to the data processed by the service providers; some questions remain to be solved:

  Who has the right to have access to what information processed by the service providers?
  What procedures have to be followed so that police or other State services can have access to navigation and positioning generated personal data?

- For billing purposes only relevant data should be processed, i.e. the id-number of the receiver and time and localisation information

- Respect for the proportionality principle should be implemented at the technological level.

- Analogous with the telecommunications sector it should be rendered possible that data subjects have the right to obtain non-itemised bills

4. ELECTRONIC PAYMENTS

4.1. INTRODUCTION.

The electronic payment instruments and systems are increasingly used in different areas of the transport world. In aviation, they are used to buy tickets through networks like Internet, in road transportation they can be used either for road tolling or for the payment for the use of collective transports.

There is a wide diversity in the types of payment systems used and the functionality they perform. The purpose of this section is to provide a summary of the several aspects of electronic payments encountered in the analysis of the different cases studies[15].

There are several possibilities to use the payment instruments :

1. The payment is a fee for the subscription to a service that is paid **globally** without regard to the use. In fact, the instrument is only used to identify the holder as a member of the network who has the right to enjoy the service.

2. The payment is made with the help of a device that allows **online payment per use**, each time it is requested to pay.

3. The payment is made at the end of a certain period but **proportionally** to the use of the system (there is a trace of each passing).

According to those possibilities and depending of the application, differenttypes of payment instruments should be used because of their particular characteristics.
For example, in the case of the subscription (1), the instrument used is relatively indifferent because that kind of system can be considered as technologically neutral. Therefore, the payment instrument does not have to be highly technical and can be a credit or debit card or even a credit or a debit transfer. To the contrary, the instrument chosen for an online payment per use should be highly technical to allow the system to work at a reasonable speed (2)[16].
For the payment proportional to the use (3), the payment instrument itself does not necessitate a high level of technique but the system put in place to compute the use of the service should offer a high reliability and the possibility to bring easily the justification of the amount invoiced.

To clarify the possible impact of the use of electronic payment instruments on the transport world, we would like to present two different instruments that we consider as the key instruments: the credit card and the reloadable instrument. The criteria of presentation are the following : how does it work, what are the possible use in transport, what is the commonest use, what are the consequences of the use and, among those, the legal consequences. We will end the analysis with some policy options.

[15] Questions related to electronic payments instruments and systems have been treated in the case study on electronic ticketing, see Annex II .
[16] For example, if a system of road tolling is put in place to struggle the traffic congestion, it would be a non sense to use in that case, payment instruments that require the vehicle to stop.

4.2. TYPOLOGY OF THE DIFFERENT PAYMENT INSTRUMENTS.

4.2.1. THE CREDIT CARD

4.2.1.1. Functioning

The credit card offers to its holder the possibility to make the issuer of the card pay for the goods and services with the possibility for him/her to get some delay in the reimbursement to the financial company. The major credit card (Visa, MasterCard, ...) can be used in a lot of foreign countries with advantageous exchange rates. The card can also be accepted for the payment at a distance, in that case the payment is initiated by the provision to the merchant of the card number and the expiration date. When that last possibility is used on the Internet, some additional security measures are sometimes added : protocols like SSL[17] or SET for example.

4.2.1.2. Possible uses in transport

The credit card is actually widely used in the transport world for :

- Road tolling
- Ordering through distance selling process (phone, Minitel, Internet,..) of transport title like train or plane ticket.
- Payment of information services provided through the Internet (e.g. traffic information).

4.2.1.3. Commonest uses

The commonest use of the credit card is the ordering of goods or services (of a medium to high value) when it is done at a distance.

4.2.1.4. Consequences of the use

The *advantage* of the use of a credit card is the "interoperability". In fact, thanks to the world-wide use of the credit card before the Internet, the credit cards issuers have achieved a quite impressing interoperability. The credit card can be used for road tolling for example in most of the European countries and sometimes in an automated way[18], it is also used to pay for goods and services offered through the Internet from a lot of countries.

4.2.2. THE RELOADABLE INSTRUMENT

4.2.2.1. Functioning

Thanks to a technology based on chips, the reloadable card permits the storing of monetary value. The last developments of that technology allow now the use of the card without contact with a card reader. The chip is equipped with an aerial that allows the sending and receiving of radio waves.

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[17] For a technical explanation of the SSL protocol see Annex II p. 27.

[18] We think for example to the "CB" ticket gates on the French highways' road tolling places where one can use its credit card without any human intervention.

4.2.2.2. Possible uses in transport

According to the capacity of storage, the chip can contain not only financial information, but also information related to a plane ticket[19], for example, or a public transport ticket.
If it is equipped with an aerial, the card can also be used for road tolling function without any need for the vehicle to stop, the chip will transmit the needed information to the tolling station through the waves.

4.2.2.3. Commonest uses

It seems difficult for the moment to circumvent the commonest use of the reloadable instrument because it is not yet widely used in the transports except in pilot experiences. It seems nonetheless that such an instrument is more adapted for the payment of small to medium amounts for services that require rapidity and it seems also to be a good instrument to prevent congestion.

4.2.2.4. Consequences of the use

♦ **Advantages:**

The positive point of the reloadable instrument is that it allows a secure payment if the level of the technology chosen is high enough[20].

The service provider is paid immediately, because the basic principle of the electronic wallet is that the money is stored on the card and therefore online transferred at the moment of the payment.

The reloadable instrument can be used not only for payment functions, but also for the storage of information concerning an electronic ticket.

♦ **Disadvantages:**

The problem of the reloadable instrument is that it is relatively little interoperable. That kind of technology requires different technical specifications, and, to make it interoperable either between different kinds of services or between different countries, it requires a previous agreement on the standards used.

[19] See Jean-François LEROUGE, "A few words about the liability of the parties", Annex II p.34 to 50.
[20] What we mean is that a chip can be bought at a lot of different prices, and the quality of the chip is the consequent. If the level of quality is high, the security and the storage capacity can normally be trustworthy.

4.3. LEGAL QUESTIONS

4.3.1. THE CREDIT CARD

♦ Evidence

One of the most embarrassing legal question when a credit card is used to pay in a distance contract is the one of the manner to bring the evidence of the transaction and the payment. In fact, according to the system, there will be or not a reliable identification of the parties and a track of the details of the transaction.

Even if such information are accessible, all legal systems do not accept electronic data as evidence. For example, countries like Belgium or France require a writing when the evidence is brought against a consumer and when the amount of the transaction is under a certain value. The problem is less important in the Common law countries where electronic documents are easier brought before the Court as proof[21].
It appears clear that the current work on the electronic signature and the certificates at the European level will bring great benefits in the evidence administration.

♦ Countermanding of the payment order

The only European legal text concerning the countermanding of a payment order is the 97/489/EC: Commission Recommendation of 30 July 1997 concerning transactions by electronic payment instruments and in particular the relationship between issuer and holder[22]. Article 5 (d) provides that the holder "*does not countermand an order which he/she has given by means of his/her electronic payment instrument, except if the amount was not determined when the order was given*". The example generally provided to illustrate that particular case is the use of a print out of the credit card as guarantee for the car renting.

An interesting example of the national regime put in place can be found in France. According to the law on cheque and payment cards[23], the order or the promise to pay given with a payment card is irrevocable. The payment can be stopped only in case of loss or theft of the card and in case of liquidation or reorganisation of the beneficiary of the payment. But it is not clear if one can apply such a text to a payment order that has not been signed by the cardholder. There are different elements to solve the question.

First of all, the *Cour de Cassation* of Paris decided in 1995[24] that the signature of the cardholder on the payment order makes it irrevocable, the holder must reimburse all the invoices that have been paid for him/her by the card issuer[25]. Furthermore, the Finance Minister already gave an official interpretation in an answer provided to the deputies[26]. In this answer, he considered the enterprises that want to accept distance payments, as contractually obliged to enter into large engagements regarding the disputes that could eventually occur with its clients. In fact, they would support the liability for the

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[21] For an analysis of the question of evidence see L. Rolin Jacquemyns, "Electronic ticketing in the sense of the online booking of tickets", Annex II p. 13 and ff.
[22] OJ L 208 02.08.97 p.52
[23] Law n° 91-1382 of the 30 December 1991 unifying the law regarding the cheque and the payment cards.
[24] Paris 12 May 1995, *Rev. Dr. Bancaire*, 1995, p. 217.
[25] The exact terms of the decision are "l'apposition de la signature du titulaire de la carte sur l'ordre de paiement confère à celui-ci un caractère irrévocable et abstrait; le donneur d'ordre doit rembourser les facture règlées par l'émetteur sans pouvoir lui opposer aucune exception tiré du rapport fondamental qui a donné lieu au paiement".
[26] Rep. Min. n° 38375, *JOAN*, Q, 8 July 1996, p. 3657 and n° 6802, *JOAN*, Q, 13 December 1993, p. 4490 and n° 7768, *JO* Sénat, Q, 2 February 1995, p. 266.

damaging consequences, direct or indirect, of all erroneous debit subject to contesting, without any time limit. An additional document can be found in the model contract issued by an economical interest group called "Groupement des cartes bancaires" that regulates most part of the legal aspects of the relationships between a merchant who wants to accept payment by credit card and the card issuer. According to the contract, the dealer is submitted to several obligations that are the conditions of the payment guarantee provided by the issuer. For example, in article 5 the payments are guaranteed with the reserve that the security measures the merchant is in charge (that are defined in the model contract and in the conditions of functioning) have been respected[27]. The model contract adds that in case of non respect of **one** of those (security) measures, the invoices and the recordings will be paid under a reserve of the good end ("bonne fin") of the encasing[28].

The security measures that have to be respected at the moment of the payment are listed in article 6 of the model contract. Among those, there are several obligations that the merchant is not able to fulfil in a payment on the Internet like, for example, the obligation to make the client type his/her code PIN. Normally, the PIN is not verified, the transaction will be executed under the condition of good end of the encasing[29], if the control of the PIN is not required because the payment is made with a non French card, the merchant is requested to make the client sign the ticket.

The framework described here relates to France, but the same problems occur in most part of the Member States.
It seems then that accepting a payment without signature represents a great risk for the merchant. First of all, because he cannot be sure of the identity of his/her client and secondly he supports the whole risk in case of contesting of the payment without having in hand a sufficient evidence of the transaction. However, there are now technical solutions that could, if the law regulates them, help to harmonise the different liability burdens. Those new techniques are the electronic and digital signatures, cryptography and the certificates[30].
We note that encouraging the electronic commerce of transport services also implies to protect the merchant. Great efforts are currently made by the European institutions to protect the consumer, it would be as necessary to create a legal framework or a system based on self-regulation principles that would offer to the merchant a reasonable (legal) security level for the transactions.

♦ **Liability in case of loss or theft**

In the recommendation on electronic payment. In the article 6 a complete framework is created to organise the burden of the risk and liability of the different parties. In the two first paragraphs, article 6 provides that in case of loss or theft:

"*1. Up to the time of notification, the holder bears the loss sustained in consequence of the loss or theft of the electronic payment instrument up to a limit, which may not exceed ECU 150, except where he/she acted with extreme negligence, in contravention of relevant provisions under Article 5 (a), (b) or (c), or fraudulently, in which case such a limit does not apply.*
2. As soon as the holder has notified the issuer (or the entity specified by the latter) as required by Article 5 (b), except where he/she acted fraudulently, he/she is not thereafter liable for the loss arising in consequence of the loss or theft of his/her electronic payment instrument."

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[27] Article 5-1:"*les opérations de paiement sont garanties sous réserve du respect de l'ensemble des mesures de sécurité à la charge de l'accepteur et définies dans les présentes conditions générales ainsi que dans les conditions particulières de fonctionnement*".
[28] Article 5-3:"*En cas de non-respect d'une seule de ces mesures, les factures et les enregistrements ne sont réglés que sous réserve de bonne fin d'encaissement*".
[29] Article 6-6:"*faire composer par le client dans les meilleures conditions son code confidentiel,... lorsque ce code n'est pas vérifié, la transaction n'est réglée que sous réserve de bonne fin d'encaissement, même en cas d'autorisation.*"
[30] For more details see annex pp. 29 and ff.

But our interest is more focused on paragraph 3 which provides that: "*By derogation from paragraphs 1 and 2, the holder is not liable if the payment instrument has been used, without physical presentation or electronic identification (of the instrument itself). The use of a confidential code or any other similar proof of identity is not, by itself, sufficient to entail the holder's liability*".
This last text presents a great interest for our purpose because he relates clearly to the question of a payment by card that uses only the card number and expiration date. A first remark concerns the lack of harmonisation of article 5 and 6 regarding to the expression used. In article 5 (b) it is said that: the holder "*notifies the issuer (or the entity specified by the latter) without delay after becoming aware of: (..) the loss or theft of the electronic payment instrument or of the means which enable it to be used*", the mean that enables the instrument to be used could be the serial number of the card and the expiration date. But, in article 6 it is only talked about the loss or theft of the instrument.
Anyway, we take the decision to consider that the loss or theft covered by the recommendation is not only the one of the instrument itself but also the one of the means that allows its use. Meanwhile, it seems difficult to imagine how a card holder could be aware of the theft of its card number. It is easy for someone who requires from him a payment to read and memorise the number and the expiration date of the card. It does not require a theft of the card. It is harder to imagine someone notify a loss or theft each time he suspects an indelicate person to have copied his/her card number.

It is certainly why the Commission added a third part to the article to create an adapted solution to that question. In fact, the consequences of that disposition are enormous! First of all, it means that the card holder will not support any liability, but in fact no details are given on the other liable parties. Will the issuer be forced to pay all the invoices to the different merchants? We hope that the question is solved in the contract between the card issuer and the merchants that accept it, if it is not the case, a legal clarification of the solution applicable in that case would be welcome, for example by transforming the recommendation into a directive with some modifications.

♦Applicable regulation with regard to the Directive 97/7/EC of the European Parliament and of the Council of 20 May 1997 on the protection of consumers in respect of distance contracts[31]

Regarding to the user information, the most interesting should be the Directive 97/7/EC of the European Parliament and of the Council of 20 May 1997 on the protection of consumers in respect of distance contracts[32]. The reason is that the contract with the airline company could be easily enclosed in the definition provided by the Directive in article 2 : 'distance contract` means "*any contract concerning goods or services concluded between a supplier and a consumer under an organised distance sales or service-provision scheme run by the supplier, who, for the purpose of the contract, makes exclusive use of one or more means of distance communication up to and including the moment at which the contract is concluded*".

But, the scope of application of the Directive excludes certain kinds of transport services. According to article 3.2 second indent : " *Articles 4, 5, 6 and 7 (1) shall not apply :*
-to contracts for the provision of accommodation, transport, catering or leisure services, where the supplier undertakes, when the contract is concluded, to provide these services on a specific date or within a specific period; exceptionally, in the case of outdoor leisure events, the supplier can reserve the right not to apply Article 7 (2) in specific circumstances".

Article 4,5,6,7(1) respectively relate to prior information, written confirmation of information, right of withdrawal and performance. It is easy to understand that it was difficult to create a general right of withdrawal for the online buying of plane ticket because there are a lot of particular conditions according to the kind of ticket that is provided. What is more complicated to understand is why the prior information (required on the basis of article 4 that is not applicable according to article 3) is not required from the supplier in that particular case. We do not understand why the consumers that buy

[31] Official Journal n° L 144 , 04/06/1997 p. 0019 - 0027
[32] Official Journal n° L 144 , 04/06/1997 p. 0019 - 0027

ticket online will not enjoy the protection of the directive for that particular service. We would recommend a modification of that directive in the sense of only keeping the exclusion in the scope of the application for article 6 (right of withdrawal) but not for the other articles. It would be logical that the legislator imposes to the service provider to provide the same information for transport services than for other services to the customer.

That modification will be necessary only if certain Member States have transposed the text of the directive with that exclusion. In Belgium, for example, the text transposing the directive[33] does not contain such an exclusion but it was recently talked about re-introducing the exception through another regulatory text. However, regarding the obligation to provide prior information it seems that the proposal for a directive on certain aspects of electronic commerce will be applicable and in that text some sections are interesting like the section 1 on establishment and information requirements, the section 2 on commercial communication and the section 3 on electronic contracts. It remains that there is a need for a text organising the respective rights and obligations of the parties when distance contracts are concluded, mostly concerning the prior information.

4.3.2. THE RELOADABLE INSTRUMENT

♦ Liability in case of loss or theft

There are not many legal texts relating to the reloadable payment instrument (after RI). The only European text that treats really of the reloadable instrument is the recommendation on electronic payment instruments[34], in that text the RI is considered as a two functions instruments : a transaction function (non-access function) and an access to the account function[35]. The non access function i.e. the use of the instrument for payments does not enjoy the protection of the recommendation in case of loss or theft, that means that the money stored on a reloadable instrument will be lost if the instrument is lost or stolen. We note that the European Central Bank in a recent comment issued a different opinion: " *the ECB would welcome the introduction of measures (such as a guarantee, loss-sharing or insurance scheme) to protect holders of electronic money against losses and to preserve their confidence in this instrument of payment. This would be even more desirable if the use of electronic money in the Community were to develop substantially over time*[36]".

♦ Protection of privacy (Chinese walls)

One of the most interesting characteristic of the reloadable instrument is that it allows the possibility to store different kinds of files on a same support. It is for example possible to store on the chip a payment software, monetary values and information that constitute a title for the public transports. That kind of coexistence can create privacy troubles if a sufficient wall is not created between the different files.

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[33] Law of the 25 May 1999 modifying the law of 14 July 1991 concerning commercial practices and the consumer protection, *Moniteur Belge*, 23 June 1999, p. 23670.

[34] 97/489/EC: Commission Recommendation of 30 July 1997 concerning transactions by electronic payment instruments and in particular the relationship between issuer and holder (Text with EEA relevance), OJCE, n° L 208 02.08.97, p.52.

[35] See Jean-François LEROUGE, "A few words about the liability of the parties", in Annex II, p. 39.

[36] Opinion of the European Central Bank of 18 January 1999 at the request of the Council of the European Union under Article 105 (4) of the Treaty establishing the European Community and Article 4(a) of the Statute of the European System of Central Banks and of the European Central Bank on (1) a Commission proposal for a European Parliament and Council Directive on the taking up, the pursuit and the prudential supervision of the business of electronic money institutions, and (2) a Commission proposal for a European Parliament and Council Directive amending Directive 77/780/EEC on the co-ordination of laws, regulations and administrative provisions relating to the taking up and pursuit of the business of credit institutions (CON/98/56), paragraph 18.

4.4. POLICY OPTIONS

4.4.1. GENERAL POLICY OPTIONS

- Encourage the work on electronic signature and the adequate legal modifications in the evidence framework. This could help to create more confidence in the relationship between service providers and client.

- Encourage the creation of a coherent legal framework to regulate the use of electronic payment instruments in distance contracts :

    1. The required security level must be clear.
    2. The security level must take into account the possibility to contest the transaction and therefore it must be possible to have a trustworthy registration of the transaction details.
    3. The duration of the archiving imposed must take the medium prescription duration in Europe into account.

- Regarding the European Directive on distance contracts, we note that such a useful text is not applicable in the field of transport. Therefore a European study could be necessary to decide whether a specific and tailored regulation of the distance contracts in the field of transport is necessary. In our opinion, it is difficult to understand why the customers would not enjoy the same protection when they conclude distance contracts for transport services and for other services.

- We remind that in some countries, the consumer has the right to pay in cash and the service provider is forced by the law to maintain that kind of payment.

4.4.2. POLICY OPTIONS SPECIFIC TO THE USE OF CREDIT CARD

- Regarding the different projects aiming at digitalising the booking and the check-in at the airport, it seems important to create a clear European legal framework for the use of credit cards in distance contracts.

4.4.3. POLICY OPTIONS SPECIFIC TO THE USE OF A RELOADABLE INSTRUMENT

- We note that the interoperability can be achieved more easily with certain payment instrument than with others. If the electronic road tolling is imposed throughout Europe, it must be interoperable, but most part of the national experiences are developed without regard to that purpose of interoperability. The consequent question is: is the reloadable instrument (even equipped to work at a distance) the best adapted one for that purpose if there is no rapid and clear action for interoperability? As we mentioned supra, actually the interoperability is already achieved by the credit card.

- Different files can be stored on a chip, therefore one must pay attention to set a clear Chinese wall between those data, so that the information will be consulted only by the relevant person.

- For the moment, the European legal framework does not impose the redeemability of the electronic monetary values stored on reloadable payment instruments. Those values are not protected against loss or theft when the instrument is used in the payment function. The ECB, in its report on electronic money and in a recent opinion, encouraged the introduction of such obligations that could certainly be beneficiary to increase the trust in electronic money instruments.

5. COMPETITION

5.1. INTRODUCTION

Even if it has been contested in the past, the application of competition law to the transport sector is nowadays certain[37]. This sector is characterised by a network architecture that consists of an infrastructure, most of the time non-duplicable, and several final services needing access to the infrastructure to be provided. The goods transport services, for instance, need an access to the road and the maritime ships need an access to harbours. Nowadays, as a lot of infrastructures are privatised and the services are liberalised, one of the most challenging question about the application of competition law to the transport sector consist in the guarantee of a fair access to the monopolised infrastructure for the services providers. To ensure this access, the essential facilities doctrine, based mainly on article 82 of the EC Treaty, has been developed. As this theory seems, most of the time, insufficient, the Council has adopted sector-specific regulation that imposes obligations to the infrastructure operators. For instance, in the airline sector, the Council has adopted a code of conduct for the computerised reservation systems or a Directive concerning the groundhandling services (see *infra*). The application of the new technologies in the transport sector does not raise very new questions in competition law and do not require a revolution in that field. Nevertheless, it could raise some new possibilities of anti-competitive conducts, which could justify some adaptations or, at least, new interpretations of the sector-specific regulations.

5.2. LEGAL ASPECTS : THE ESSENTIAL FACILITIES DOCTRINE

5.2.1. INTRODUCTION.

The essential facilities[38] doctrine, which was imported from the US anti-trust, has been developed recently in the EC competition law through a serie of Commission decisions, namely in the field of transport[39], and was confirmed, though restrictively, by the Luxembourg Court in 1998[40]. It is characterised by the analysis of two distinct but linked markets. The **upstream market** is the one of the infrastructure, which could be a tangible or intangible asset. It is generally a monopoly for economic reasons (natural monopoly) or regulatory reasons (legal monopoly). The **downstream market** is the one of the final good. If it only interests the consumer, its production requires nonetheless an access to the infrastructure. The goal of the essential facilities doctrine is to limit the negative welfare impact of the monopoly by limiting it to the upstream market, where it is inevitable.

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[37] M. WAELBROECK & A. FRAGNANI, *Commentaire Megret- le droit de la CE, V.4: Concurrence*, Bruxelles, Ed. Université de Bruxelles, 1997, n° 51; Joint Cases 209-213/84, *Ministère Public/Asjes (Nouvelles Frontières)* [1986] ECR 1425.

[38] On this doctrine, see: J. TEMPLE LANG, 'Defining Legitimate Competition: Compagnies' Duties to Supply Competitors, and Access to Essential Facilities', *Fordham Corporate Law Institute*, 1995, 245-313; D. VAN LIEDEKERKE, 'Access to infrastructures, networks and services under EC competition law. Interconnection in telecommunications and precedents in others sectors' in UNION DES AVOCATS EUROPEENS, *The Law of the Information Super-Highways and Multimedia: A New Challenge*, Bruxelles, Bruylant, 1997, 131-154.

[39] In maritime transport, see: Comm., 11 June 1992 [1992] CMLR 255, not reported in the Official Journal; Comm., 21 dec. 1993, *Sea Containers/Stena Sealink* [1994] OJ L-15/8; Comm., 21 dec. 1993, *Port of Rodby* [1994] OJ L-55/52; in airline transport, see: Comm. , *London European/Sabena* [1988] OJ L-317/47; Comm., *British Midland/Aer Lingus* [1992] OJ L-96/34.

[40] Some older cases could prefigure the doctrine: Joint cases 6/73 and 7/73 *Commercial Solvents* [1974] ECR 223; Case 27/76 *Uniteds Brands/Commission* [1978] ECR 207; Case 311/84 *CBEM/CLT* [1985] ECR 3261; Case 238/87 *Volvo AB/Erik Veng Ltd* [1988] ECR 6211; Case 18/88 *GB-Inno-BM* [1991] ECR I-5941; Joints cases C-241/91P and C-242/91P *RTE and ITP/Commission (Magill)* [1995] ECR I-743; Case T-504/93 *Tiercé Ladbroke/Commission* [1997] ECR II-923.

To prevent the holder of the essential facilities from using his monopoly power on the downstream market, the competition law imposes him to give access to his installations.

5.2.2. THE EUROPEAN NIGHT SERVICES CASE.

Four European railway companies have concluded an agreement to establish the joint venture European Night Services (ENS) to exploit a night railway connection between the United Kingdom and the continent through the Channel Tunnel.
The Commission[41] decided that the agreement was restrictive of competition in the sense of article 81 of the EC Treaty but exempted it for eight years under conditions. The founding companies should give access at every new entrant to the same essential services, namely the locomotives and slots on their national network and on the Channel Tunnel, at the same conditions as they do for ENS.
The Court of First Instance[42] annulled the Commission's decision because the lack of proof that the agreement was restrictive of competition and needed exemption. But in case it should be estimated that the agreement infringed article 81.1 of EC Treaty, the Court examined if the condition of the exemption was a correct application of article 81.3. At this occasion, the Court defined the essential facilities by stating *that neither the parent undertakings nor the joint venture thus set up may be regarded as being in possession of infrastructure, products or services which are 'necessary' or 'essential' for entry to the relevant market unless such infrastructure, products or services are not 'interchangeable' and unless, by reason of their special characteristics – in particular the prohibitive cost of and/or time reasonably required for reproducing them – there are no viable alternatives available to potential competitors of the joint venture, which are thereby excluded from the market*[43]. Applying these principles, neither the slots nor the locomotives could be considered as essential facilities[44].

5.2.3. THE *BRONNER* CASE[45].

Mediaprint edited two Austrian newspapers, which represented together 46.8% of the national market and established and controlled the only nation-wide newspaper home-delivery scheme. Oscar Bronner, who edited another Austrian newspaper, which represented only 3.6 % of the market, was seeking access to the scheme of Mediaprint. As this latter refused, Bronner took him before the Austrian court for abuse of dominant power. This Austrian court asked to the Court of Justice if the refusal by a press undertaking –which holds a very large share of the daily newspaper market in a Member State and operates the only nation-wide newspaper home-delivery scheme in that Member State– to allow the publisher of rival newspaper, which by reason of its small circulation is unable either alone or in co-operation with other publishers to set up and operate its own home-delivery scheme in economically reasonable conditions, to have access to that scheme for appropriate remuneration, constitutes the abuse of a dominant position within the meaning of Article 82 of the Treaty.
The Court answered that it would be necessary to plead the abuse of dominant power *not only that refusal of the service comprised in the home delivery be likely to eliminate all competition in the daily newspaper market on the part of the person requesting the service and that such refusal be incapable of being objectively justified, but also that the service in itself be indispensable to carrying on that person's business, inasmuch as there is no actual or potential substitute in existence for that home-delivery scheme*[46].
It added that *in order to demonstrate that the creation of such a system is not a realistic potential alternative and that access to the existing system is therefore indispensable, it is not enough to argue that it is not economically viable by reason of the small circulation of the daily newspaper or newspapers to be distributed. For such access to be capable of being regarded as indispensable, it*

[41] Comm., 21 sept. 1994, *European Nigths Services* [1994] OJ L-259/20.
[42] Joint cases T-374/94, T-375/94, T-384/94 and T-388/94 *European Night Services i.a./Commission* [1998] ECR II-3141.
[43] Point 209.
[44] Points 211 to 221 of the decision.
[45] Case C-7/97 *Bronner and Mediaprint* [1998] ECR I-7791
[46] Para. 41of the decision.

would be necessary at the very least to establish, as the Advocate General has pointed out at point 68 of his Opinion, that it is not economically viable to create a second home-delivery scheme for the distribution of daily newspapers with a circulation comparable to that of the daily newspapers distributed by the existing scheme[47]. Therefore, the Court concluded that the refusal does not constitute abuse of a dominant position.

5.2.4.APPLICATION CONDITIONS.

On each of the two markets, one condition is required to invoke the theory. On the upstream market, the installation has to be essential to gain access to the downstream market. This implies two cumulative requirements. On the one hand, there is no existing alternative, even less favourable, to enter on the downstream market. On the other hand, there is no potential alternative, i.e. it is not possible to set up a new infrastructure on reasonable terms. This impossibility could be due to technical, financial or public interest reasons and could evolve with time. The test to evaluate if the establishment of a new installation is economically feasible should not be based on the own characteristics of the party demanding access but on the ones of a fictive company having the *same markets shares* on the downstream market than the holder of the facilities. The Court uses this very restrictive test to limit the expansion of the doctrine.
On the downstream market, the competition has to be absent or insignificant because the consumer, whose protection is the goal of anti-trust, cares only about this market. If it is in competition, there is no need of intervention. This condition will normally be fulfilled if the facility is actually essential and its access is refused. As there is only one way to enter the downstream market and this one is refused, it seems obvious that there would not be any competition on this market.

5.2.5.OBLIGATION IMPOSED.

If a firm holds an essential facility and there is no competition on the final good's market, this firm should behave as an independent operator, as if it was not active on the downstream market. It should give access to the infrastructure on reasonable conditions, i.e. cost oriented, and non-discriminatory, even with its owns operations. The access should be gained by old clients but also by new entrants. The firm has the obligation to inform and consult the current and potential clients. Only objective technical, economical or public interest reasons could justify a refusal of access. The limit of capacity could only justify a refusal for a limited period of time, especially if the installation is completely used by its holder.

5.2.6.RELATIONSHIP BETWEEN THE ESSENTIAL FACILITIES DOCTRINE AND ARTICLE 82 OF THE EC TREATY.

The two approaches are different. Whereas the essential facilities doctrine focuses on its two application conditions, and mainly the first one which consists of deciding if the installation is actually essential, article 82 states three steps: definition of the relevant market, qualification of a possible dominant position and determination of an abuse. Nevertheless, the essential facilities doctrine has its main cause in article 82, but constitutes a very particular type of dominant position. The first condition of the doctrine, i.e. absence of existing alternative, is close to the definition of the market and we can observe that the use of the doctrine tends to limit this market at the sole facility. Moreover, if there is no existing or potential alternative to the installation, the dominant position of its holder is extremely strong as it does not face any effective or even potential competition. For this reason, the doctrine imposes obligations that would otherwise not exist in a "classical" dominant position case, it creates a new category of abuse. For example, the holder of the installation must give access not only to existing clients but also to new ones, it could not discriminate not only against third party but also against its own operations on the downstream markets. We could conclude that the doctrine does more than imposing additional obligations on dominant firms already under an obligation to supply, it widens the range of the firms under obligations.

[47] Paragraph 45 et 46 of the decision.

5.3. APPLICATION OF THE THEORY TO TRANSPORT SERVICES

5.3.1. ROAD TRANSPORTATION: ROAD TOLLING

5.3.1.1. Introduction.

In road tolling, the new technologies themselves do not raise any competition problems because the market power of an undertaking does not derive so much of the control of the technologies than the control of the road. The situation is thus different from others sectors of the Information Society, for instance the digital pay-TV, where the control over the technologies results in a strong market power. Nevertheless, the possibilities offered by the new technologies could lead to some anti-competitive behaviour. First, we will see whether a company, responsible for the tolling, is subject to the competition rules. To be exempted of the antitrust law, the company has either to prove that it is not an undertaking or to invoke the exception of article 86 §2 of the EC Treaty, concerning the services of general economic interest. Secondly, we will see some of the possible infringements of competition law due to road tolling. As it is impossible to envisage all of them, we will concentrate on two important ones: the conditions of access to the road and the possible access to the tolling system to provide value-added services.

5.3.1.2. Condition to apply the competition rules : being an undertaking.

In *Höfner and Elser*[48], the Court of Justice defined an undertaking as "every entity engaged in an economic activity, regardless of the legal status of the entity and the way it is financed"[49]. It adopted this definition in several subsequent decisions[50] and its position seems now firm on that point. The question to solve is then the definition of an economic activity. In *Höfner and Elser* the Court estimated that the employment procurement activity is an economic activity and hence, the employment agency engaged in the business of employment procurement may be classified as an undertaking, in spite of its public status[51]. On the contrary, in *Poucet et Pistre*, the Court considered that "Sickness funds, and the organisations involved in the management of the public social security system, fulfil an exclusively social function. That activity is based on the principle of national solidarity and is entirely non-profit-making. Accordingly, that activity is not an economic activity "[52]. In *Eurocontrol*, the Court detailed the three activities of the regional international organisation Eurocontrol. First, it is competent for the research, planning and co-ordination of national air navigation policies. Secondly, it is competent to establish and collect the route charge levied on users of air space, but these charges are fixed by the contracting States and must be paid over to them after a deduction of an administrative rate intended to cover the collection costs. Finally, it can provide operational exercise of air navigation control at the request of the States. The Court concluded that the Eurocontrol's activities are connected with the exercise of a public authority and are not of economic nature[53].

Applying these criteria to the road tolling, we can distinguish two different cases. In the first one, a private company, eventually in partnership with a public one, build a road and make pay for its access. In the second case, the road is build by the State, but it asks a company to collect on its behalf money for access; the purpose of the tolling being twofold: financing the infrastructure and/or managing the traffic. In the first case, the company is engaged in an economic activity and therefore is an

[48] Case C-41/90, *Höfner and Elser/Macroton* [1991] ECR I-1979 para. 22-23.
[49] Case C-41/90, *Höfner and Elser/Macroton* [1991] ECR I-1979 para. 21.
[50] Joint cases C-159/91 and C-160/91, *Poucet et Pistre* [1993] ECR I-637 para. 17; Case C-364/92 *Eurocontrol* [1994] ECR I-43 para. 18; Case C-55/96 *Job Center* [1997] ECR I-7119 para. 21.
[51] Same solution in Case C-55/96 *Job Center* [1997] ECR I-7119 para. 25.
[52] Joint cases C-159/91 and C-160/91, *Poucet et Pistre* [1993] ECR I-637 para. 18 and 19.
[53] Case C-364/92 *Eurocontrol* [1994] ECR I-43 para. 22, 23, 24, 30.

undertaking. That seems also to be the implicit position of the Commission in its recommendations on the application of the competition rules to the new transport infrastructure projects[54]. It considered that competition rules are applying when an undertaking build new infrastructure. The second case is very close to *Eurocontrol* decision and therefore, it is possible that the company would not be subject to any competition rules.

5.3.1.3. Infringement of competition rules - Access conditions to the road.

The road could be considered as an essential facility. As we have seen, two conditions are required. On the upstream market, the road has to be essential to gain access to the market of the transport services. This implies that there is no existing alternative to manage the transport i.e. no others roads or others means of transport which could be substitutable and also that there is no potential alternative. On the downstream market, the competition has to be insignificant. It appears that these conditions will rarely be met because there often exist some alternative roads and hence the competition in the transport market is important. Nevertheless, if the road is essential facility, its holder has to behave as an independent operator. These obligations will be particularly important if the builder of the road is also a transport operator. The access to the road has to be guaranteed for everyone at reasonable and non-discriminatory conditions. The reasonable conditions could be the marginal social cost as it is defined in the Commission White Paper fair payment for infrastructure use[55]. For similar reasons, the Commission stated in its recommendations on the application of the competition rules to the new transport infrastructure projects that an agreement between undertakings to set up a new road could be exempted on the basis of article 81 §3 of EC Treaty even if it reserves some of the capacity to some services operators. But the reservation has to be proposed to every operator that could be interested in, it has to be proportioned to the direct or indirect financial engagement of these operators and it cannot exceed a reasonable period of time[5657].

5.3.1.4. Following – Access conditions to the tolling system.

The two main tolling technologies, namely the one based on microwave technology (DSRC) and the other based on satellite positioning (GNSS) and mobile telephone (GSM) technology, might be used for other applications than electronic fee collection, like route guidance, traffic management, protection against car theft or logistic fleet management[58]. For the provision of these value-added services, the tolling system could be considered as an essential facility. It will often be the case as it will often be indispensable to use the tolling infrastructure to provide these services. Again, the holder of the tolling system will have to behave as an independent operator i.e. he will have to give access at every entrant on reasonable end non-discriminatory conditions[59]. It implies that he should make his technology available to new entrants wishing to develop an interoperable service.

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[54] *Annual Report of the Commission to the Council and the European Parliament on the Trans-European Networks*, Dec. 1995, COM(95) 57, especially Annex II: TEN and Competition in the transport sector; *Clarification of the Commission recommandations on the application of the competition rules to the new transport infrastructure projects* [1997] OJ C-298/5.

[55] *White Paper of the Commission on Fair Payment for Infrastructure Use: A phased approach to a common transport infrastructure charging framework in the EU*, COM(98) 466 final.

[56] *Annual Report of the Commission to the Council and the European Parliament on the Trans-European Networks*, Dec. 1995, COM(95) 57, especially Annex II: TEN and Competition in the transport sector, n° 20-21; *Clarification of the Commission recommandations on the application of the competition rules to the new transport infrastructure projects* [1997] OJ C-298/5, n° 38.

[57] See also the Eurotunnel case: Comm., *Eurotunnel* [1994] OJ L-354/6; Case T-79/95 *SNCF & British Rail/Commission* [1996] ECR II- .

[58] *Communication from the Commission on Interoperable Electronic Fee Collection System in Europe*, COM(1998) 795 final, n° 34.

[59] See the similar case *Banksys/Belgacom* [1997] Competition Report 149. The Commission received notification of two memoranda of understanding between Banksys (which manages the Belgian debit card

5.3.1.5. Interoperability and competition law.

Even if the interoperability of the different tolling systems is highly desirable[60], it could not be imposed with the competition rules, as in some other sectors. If a market power derives from the control of a certain technological standard, a refusal to give access to this technology could be anti-competitive[61] and therefore, the antitrust regulation could impose the interoperability. But the market power of the undertaking in charge of the road tolling does not derive so much of its control of one specific tolling standard but results of its control over the road because a transport company prefers a shorter route with non-interoperable tolling system than a longer route with an interoperable system. Therefore, the antitrust regulation could not justify interoperability between the different tolling standards.

5.3.2. AIR TRANSPORTATION: ONLINE BOOKING OF TICKETS

5.3.2.1. Computer Reservation Systems and anti-competitive behaviours.

The computerised reservation systems (CRS) are computerised systems containing information about, *inter alia*, air carriers' schedules, availability, fares and related services, with or without facilities through which reservations can be made or tickets may be issued, to the extend that some or all of these services are made available to subscribers. To fully understand the competition problems posed by the CRS, we must distinguish three separated, but linked, markets: the airline services market, the CRS market and the tickets distribution market. As these markets are strongly related, the undertakings could use, and abuse of, their power on one market to increase their power on another market. Three main abuses seem possible: the CRS operator can refuse to integrate one airline company and hence limit the company's possibilities to attract customers; the CRS operator can refuse to give access to his system to one travel agency and thereby limit the products the agency can offer; a airline carrier can refuse to give information or accept reservations of one CRS, thereby limiting the CRS' products. These abuses are very probable because the CRS, as an emanation of the companies' internal databases, are controlled by air carriers.

5.3.2.2. Code of conduct for computerised reservation systems.

Some of these conducts could be punished with the article 81 and 82 of the EC Treaty[62]. As these articles seem insufficient, the Council enacted a code of conduct[6364] to regulate the behaviours of the

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system), Belgacom (a Belgian telecommunications operator) and three Belgian banks. These agreements seek to extend the functions available on the Proton card, the electronic purse launched in Belgium. Under the agreements, carriers of Proton cards will be able to reload them with the help of telephones specially equipped for that purpose and use them as calling cards. The investigation of the Commission revealed no grounds for actions under articles 81.1 and 82 of the EC Treaty for three main reasons. First, the parties had deleted the non-competition clauses concerning smart cards. Second, any manufacturer or operator will be authorised on request to develop or have developed payment terminals for telephone calls or loading terminals based on specifications obtainable from the Interbank Electronic Security Committee. Third, any operator may obtain memory space on the smart card on the same terms as Belgacom.

[60] *Communication from the Commission on Interoperable Electronic Fee Collection System in Europe*, COM(1998) 795 final.

[61] *Communication from the Commission on Standardisation and the Global Information Society: The European Approach*, COM(96) 359 final, n° 6, 15, 18. See also: A.N. VOLLMER, 'Product and Technical Standardisation under Article 85' [1986] *ECLR* p. 388-402; J. TEMPLE LANG, 'European Community Antitrust Law – Innovation Markets and High Technologies Industries', *Fordham Corporate Law Institute*, 1997, p. 519-600.

[62] Comm. 4 Nov 1988, *London European/Sabena* [1988] OJ L-317/47.

CRS owners by imposing them certain obligations. Since this code is a Regulation, it is directly binding in the Community and all relevant contracts have to be brought in line with[65]. Moreover, an agreement between undertakings to set up a CRS will be exempted on the basis of a block exemption if it respects several obligations identical to the ones contained in the code[66].
To ensure a fair competition on the market, the code contains three kinds of obligations. Firstly, every air carrier must gain an open access to the CRS. This implies several obligations to the system vendor who must behave as an independent operator. It shall allow any carrier to participate, on an equal and non-discriminatory basis, in its distribution facilities within the available capacity of the system concerned and subject to any technical constraints outside the control of the vendor (art. 3.2 of the code). It shall load and process data provided by carriers with equal care and timeliness (art. 4 and 4a of the code). It shall display the data on a clear and non-discriminatory basis (art. 5 of the code). The fee charged shall be non-discriminatory, reasonably structured and related to the cost of the service provided (art. 10.1.a of the code). Secondly, every subscriber, namely the travel agency, must gain an open access to the CRS. This implies that a system vendor shall make any of the distribution facilities of a CRS available to any subscriber on a non-discriminatory basis (art. 9 of the code). The fee charged shall be non-discriminatory, reasonably structured and related to the cost of the service provided (art. 10.1.b of the code). Thirdly, every CRS must have an open access to the information and reservation possibilities of the airline companies. This implies that the carrier may not discriminate a competing CRS by refusing to provide the same information and distribute the same product relating to its own air services as that which it provides to its own CRS (art. 3a of the code). Moreover, a carrier may not incite the subscriber to use any specific CRS (art. 8 of the code).

5.3.2.3. The code of conduct and the new technologies - CRS services distributed through Internet.

The Internet operators do not fall within the definition of a system vendor or CRS and hence, are not subject to the code. They act only as sophisticated communication links between information providers (airline or CRS) and their subscribers and do not contain any information on air transport service *per se*. On the other hand, the information services providers must insure compliance with the code provision[67]. As we can see, if a CRS is electronically distributed to the 'classical' subscribers, as a travel agency, the new technologies do not raise any particular problems. But the Internet offers the possibility to bypass the traditional ticket distributors and to give the consumer directly access to the CRS. As the typical CRS' customer would move from a travel agency to a particular consumer, the code has to be amended to take into account this substantial modification.

5.3.2.4. Following – Airlines companies sites.

If a carrier uses the Internet to display information only about its own services, it would not be considered as a CRS because the code definition of a CRS refers to air carriers in the plural[68]. Therefore, if a site contains information on only one company, it won't be subject to the code. If a carrier uses a CRS on its Internet site and the site is clearly identified as being the one of the carrier, it

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[63] Council Regulation 2299/89/EEC of 24 July 1989 on a code of conduct for computerised reservation systems [1989] OJ L-220/1 amended by Council Regulation 3089/93/CEE of 29 October 1993 [1993] OJ L-278/1 and by Council Regulation 323/1999/CE of 8 February 1999 [1999] OJ L-40/1.
[64] B. ADKINS, *Air Transport and EC Competition Law*, 1994, ch. 8; J. GOH, *European Air Transport Law and Competition*, 1997, ch. 11.
[65] *Explanatory Note of the Commission on the EEC code of Conduct for Computer Reservation Systems* [1990] OJ C-184/2.
[66] *Commission Regulation 3652/93* [1993] OJ L-333/37.
[67] *Proposal presented by the Commission for a Council Regulation amending Council Regulation 2299/89 on a code of conduct for computerized reservation systems*, COM(97) 246 final, n° 41-42.
[68] *Idem*, n° 42.

will be exempted from the articles 5 and 9.5 of the code, concerning the neutrality of the principal display[69].

5.3.2.5. Following – Digitalisation of ticket.

If a carrier offers the possibility to issue electronic tickets to one CRS, it must offer the same possibility to all other CRS, by the application of the articles 3b and 8 of the code. In this context, the Commission has just fined the German airline Lufthansa 10,000 Euro in the first decision taken under the code of conduct[70]. In 1997 Lufthansa introduced incentives linked to the issue of electronic tickets. However, since the CRS Amadeus, of which Lufthansa is the part owner, was the only CRS able to issue such ticket at that time, the incentives could only be earned by those using the services of Amadeus. Despite requests, Lufthansa has made its electronic ticketing function available to other CRSs only in end of 1998. The Commission therefore decided that Lufthansa has contravened the article 8.1 of the code.

5.3.3.AIR TRANSPORTATION: DIGITALISATION OF TICKETS

5.3.3.1. Groundhandling services and anti-competitive behaviours.

The groundhandling services aim the services provided to airport users at airports, such as, for instance, the passenger handling, the baggage handling, the freight and mail handling or aircraft services or maintenance. In the past, most of the airports authorities were the sole provider of these services for two mains reasons: either they have been granted special or exclusive rights for the provision of these services or they refused access to the airport facilities that they controlled to a new entrant wishing to offer groundhandling services. As these services constitute an important part of the airline benefits, maintaining a monopoly on the ground severely impairs the benefits of the liberalisation of the air. Therefore, the Commission decided to challenge every abusive conduct of the airport authorities on the basis of article 82 of the EC Treaty[71] and the essential facilities doctrine. As these measures seemed insufficient, the Council adopted the directive 96/67[72] to liberalise the groundhandling services and to ensure a fair access to the airport facilities.

5.3.3.2. Directive 96/67 on the access to groundhandling market.

The Directive states that the Member State shall ensure free access by suppliers of groundhandling services to the market for the provision of groundhandling services to third parties and ensure the freedom to self-handle these services (art. 6.1 and 7.1 of the directive). Nevertheless, for some services (art. 6.2 and 7.2 of the directive) or in some exceptional circumstances (art. 9 of the directive), the State could limit the numbers of service providers whoseselection must follow certain principles such as non-discrimination (art. 11 of the directive). Moreover, the State may make the services conditional upon the approval of an independent public authority (art. 14 of the directive) and some rules of conduct could be enacted to ensure the proper functioning of the airport (art. 15 of the directive). But the removal of the legal barriers to enter on the groundhandling service market does not suffice to obtain a workable competition on this market. As the airport authorities control the airport facilities,

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[69] Art. 21.1.b of the code; *Proposal*, n° 43.

[70] *Lufthansa* [1999] CMLR 574.

[71] Comm., 14 Jan. 1998, *Flughafen Frankfurt/Main AG* [1998] OJ L-72/30; Comm., 11 juin 1998, *Alpha Flight Services/Aéroport de Paris* [1998] OJ L-230/10.

[72] Council Directive 96/67/CE of 15 October 1996 on access to the groundhandling market at the Community airports, *OJ*, 1996, L-272/36. See: K. KARLSSON & J.J. CALLAGHAN, 'Air Transport Liberalisation Comes Down to the Ground: Recent Developments in the Groundhandling Sector' [1999] *ECLR* 86-100.

they could impede the entry on the service markets by refusing access to these essential facilities. To alleviate these anti-competitive conducts, the directive states that the Member States shall ensure that the entrant on the services market have an access to the airport installations to the extend necessary for him to carry out his activities (art. 16 of the directive).

5.3.3.3. Directive 96/67 and new technologies – digitalisation of tickets.

The electronic ticketing will modify at least three groundhandling services, namely the handling of passengers, luggage and freight. As the provision of these services is liberalised, the airport authority could not limit the digitalisation. Nevertheless, it seems logical that the authority could impose a minimum standard to ensure interoperability between the different systems of the airlines companies, which are active on the same airport. These standards could be imposed as a rule of conduct mentioned by the article 15 of the directive. As the article states, the rule has to be non-discriminatory, related to the intended objective and may not reduce the market access to a level below the one provided by the Directive. Moreover, the digitalisation could imply a non-duplicable centralised infrastructure to process all the data. In accordance with article 8 of the Directive, the management of this infrastructure could be reserved to the managing body of the airport or another body subject which would ensure that the management of these infrastructure is transparent, objective and non-discriminatory and, in particular, does not hinder the access of groundhandling services or self-handling airport users within the limits provided by the directive.

6. GNSS-2: LIABILITY ISSUES

6.1. INTRODUCTION AND CONTEXT

Global Positioning Systems are space-based radio positioning systems that provide 24 hour three-dimensional position, velocity and time information to equipped users. Today the use of the satellite technology in the transport sector relies only on the US GPS[73] and the Russian GLONASS[74] systems created for military purpose. A lot of reports already highlighted the inadequacies of GPS to civil use.

The dependence of Europe on an inadequate system resulted in the wish to develop a European satellite navigation system for civil use. A first European contribution will consist of the design of EGNOS[75] which implementation phase would be completed in 2003 and which will be followed by the development of GALILEO (European contribution to GNSS-2) which would normally be operable in 2008-2010. GALILEO has a civil aim and its success shall come from its adequate answer to the users expectations, i.e. *inter alia* a guaranteed security, availability and accuracy of the system. The need for a liability framework thus really exists, but would nonetheless not involve that all the actors would be systematically responsible for every damage, that all damages would be completely repaired, that every positioning has to be perfect or that the user has no obligations to fulfil when using this technology.

In order to tackle the liability issue usefully, we chose not to repeat the points which were already discussed in the ***Liability and Insurance Report***[76] of February 1999 which has already been transmitted to the European Commission and tried to find out a comprehensible and general legal framework applicable to different technical structures[77].

We would approach the following topics:

- Determination of the GALILEO service categories **(section 2)**
- Military concerns concerning the civil aim of GALILEO **(section 3)**.
- Analysis of the liability issue **(section 4)** divided in two parts.
  - a) Examination of the international and European texts concerning liability
  - b) More specific considerations about each Galileo service category.
- Conclusion and Policy Options **(section 5)**.

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[73] "GPS stands for *Global Positioning System.* (...) There are currently two "public" GPS systems. The **NAVSTAR** system is owned by the United States and is managed by the Department of Defence. The **GLONASS** system is owned by the Russian Federation. While both NAVSTAR and GLONASS systems are global positioning systems, the NAVSTAR system is often referred to (in the U.S., anyway) as *the* GPS because it was generally available first. Nevertheless, both systems are GPS systems." John T. BEADLES, *Introduction to GPS applications*, http://ares.redsword.com/GPS/

[74] GLObal NAvigation Satellite System

[75] European Geostationary Navigation Overlay Service, for more information see J. BENEDICTO *et alii*, "EGNOS, The first European implementation of GNSS – Project status overview", *Proceedings of the GNSS '99 conference*, Part I (oral sessions), 1999, Genoa, Italy, p. 191-198.

[76] RUPP, LAGARRIGUE, *Claim GNSS, Liability and Insurance Report,* Program ref. AO/VII-A2/40-97 (confidential), February 1999, CLAIM/WP4/D4_10, 102 p ("CLAIM Report")

[77] we first wanted to describe GNSS's structure and more specifically the exact way followed by the signal. A clear scheme would indeed allow us to determine which parties are involved in the GNSS process and which ones support a part of responsibility. But as the system does not already exist, it is difficult to know precisely the way the signal would take. A call for proposals (n° 13213) concerning precisely that point (research for the development of the second generation of GNSS) was published in June 1999. The present liability framework would be applied to the finally defined architecture. Some figures schematising a probable structure can be found in the Final Report, Ad-Hoc Working Group on the Set-up of an organisational framework for GNSS, Global Navigation Satellite System High-Level Group, May 1999, pp. 6-10, figures 1-4.

6.2. SERVICE CATEGORIES

GALILEO would provide different kinds of services in all transport fields which could be classified in three categories:

- **Open Access Service (OAS):** This basic service, equivalent or superior to modernised GPS service, would be freely provided to the mass market.
- **Controlled Access Service-1 (CAS-1):** Service provided on a commercial basis to users who require a guaranteed service level with liability for signal continuity taken by the service provider .
- **Controlled Access Service-2 (CAS-2):** This category includes services for safety applications, that have implications for the safety-of-life, and services for security application that will be provided under the control of government or military agencies having no civil applications.

6.3. LEGAL QUESTIONS

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6.3.1. MILITARY CONCERNS

In a recent study made by the EU[78], the defence forces warned that, in times of tension, crisis or war, they would jam or disrupt the OAS and CAS-1 services that may be used by a hostile force and would not necessarily announce it. This point has important consequences on liability.

6.3.2. GENERAL LIABILITY

6.3.2.1. International texts[79]

The examination of the international texts that could be applied will be the first step in the analysis of the GNSS liability issue. This work has been done yet in the *Liability and Insurance Report* within which the authors highlighted that neither the Outer Space Treaty[80] nor the Liability Convention[81] could be applied in case of damage resulting from errors or failures of the basic signal.

6.3.2.2. European texts

As for the international level, no existing directive envisages a liability framework for satellite signals. We had therefore a look at more general directives dealing with liability such as the Council Directive 85/374 concerning liability for defective products[82] and the *Proposal for a European Parliament and Council Directive on certain legal aspects of electronic commerce in the internal market*[83].

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[78] The EU initiated a Civil Military Interface Study analysing the views of military representatives of EU, non-EU states and NATO members. See L.TYTGAT *et alii*, "Development of a Civil Military Interface in Europe for Galileo", *Proceedings of the GNSS '99 conference*, Part I, Genoa, Italy, October 1999, p. 22-27.

[79] Please have a look at the *Liability and Insurance Report Claim GNSS (op.cit.)* for a complete analysis of the INMARSAT Convention (especially article 22 of this Convention) and other international agreements.

[80] Treaty of 27 January 1967, on principles governing the Activities of States in the exploration and use of outer space, including the moon and other celestial bodies.

[81] Convention of 29 March 1972, on the international liability for damage caused by space objects.

[82] Council Directive 85/374/EEC of 25 July 1985 on the approximation of the laws and regulations and administrative provisions of the Member States concerning liability for defective products, *O.J.*, L 210, 7 August 1985, p. 0029-0033.

[83] COM (1998) 586 final.

6.3.2.2.1. Council Directive 85/374

Unfortunately, the terms of the Directive does not allow us to consider the Signal-in-space (SIS) as a product[84]. The Directive could therefore not be applied in the field of the GNSS liability excepting the case of the existence of a receiver's defect.

6.3.2.2.2. Proposal for a Directive concerning e-commerce

The next text we wanted to examine is the *Proposal for a European Parliament and Council Directive on certain legal aspects of electronic commerce in the internal market*. This proposal will apply to all "Information Society services" which means "any service normally provided for remuneration, at a distance, by electronic means and at the individual request of a recipient of services"[85].

We realised that the qualification of a GNSS service as an Information Society Service would depend on the kind of service it is (OAS or CAS) and on the mean used to send the value-added services. A distinct legal regime would thus be applied to very similar services and it would create an undesired complexity.

6.3.3. SPECIFIC LIABILITY

A first pace would be the adoption of a regional agreement, i.e. a European Directive. In order to achieve this Directive, the following considerations could be useful.

6.3.3.1. Open Access Services (OAS)

As we already explained, this mass-market service would be freely provided to all the GALILEO receiver buyers, at least as long as GPS will be freely provided. The SIS would be directly received without additional service and no contract would exist with the end user. The potential claimants are clearly identified in *the Claim GNSS, Liability and Insurance Report* of February 1999[86] and divided into primary, secondary and tertiary claimants[87] whose actions would depend on the identity of the defendant and the law that would be applied, but will normally based on the states "ordinary law[88]".

Apart from the liability of the EU, European Commission, EUROCONTROL, ESA, and INMARSAT that was already approached in the *Claim GNSS Liability and Insurance report*, the GALILEO Vehicle Company (VC) would be a potential defendant (the Galileo Steering Committee (GSC), composed by representatives of member states, to manage the first phase of Galileo, and the Programme Management Board (PMB) could be the embryo of this future Vehicle Company[89]). In charge of the overall management of GALILEO, the Vehicle Company has also safety and security obligations and could even be responsible for the implementation of receiver standards. A breach in its obligations would constitute a fault and engage its aquilian liability.
The VC and the PMB would thus act as a sort of "central Galileo claim desk"[90] that should be liable for every disruption of the system, but also for abnormal errors that would occur[91]. Concerning the

[84] See the definition of "products" in the Council DIRECTIVE 85/374.
[85] Proposal, article 2.
[86] *Op.cit.* note .
[87] *Claim GNSS*, p. 6-8, *op. cit., note* .
[88] In Belgian law we would apply the Articles 1382 and 1384 of the Civil Code.
[89] See the probable Galileo structure presented in the Final Report, Ad-Hoc Working Group on the Set-up of an organisational framework for GNSS, Global Navigation Satellite System High-Level Group, May 1999, pp. 6-10, figures 1-4.
[90] This concerns of course only the faults committed by a body of the Galileo structure and does not prevent the possibility of suing the manufacturer, the service provider or the transport company in CAS-1 or CAS-2.
[91] See Appendix B for an overall overview of errors.

normal errors, the users of the OAS, for instance, would have to know that the provided service has not an accuracy of 100 percent and that they have to use it carefully. This requires nevertheless the determination of :

- the exact service that must be provided in the OAS (accuracy, clock and ephemeris corrections,...)
- the information that has to be given to the user (accuracy, conditions of use of the receiver...)
- the difference between normal and abnormal errors and the technical possibility to prove the existence of an abnormal error.

With the central desk, the victim would not have to find out which particular ground-based station or satellite manufacturer made a fault, but the VC should have the possibility to sue those GNSS segments on the basis of their contractual liability. A contract should indeed be concluded between the VC and the Galileo segments. This contract should specify the obligations and liability of the parties, including provisions about a possible Insurance. But it is not quite sure that the GALILEO segments could be insured. The implementation of a fund as for oil spills could therefore be envisaged.

6.3.3.2. Controlled Access Services-1 (CAS-1)

The existence of a contract between the service provider and the end user allows an action for breach of contract. Typical claimants would be private end users and companies using, for instance, tracking services. Paying for this service they would expect correct information with an accuracy that would depend on the required application. Once again the potential defenders could be the manufacturers of the receiver and the VC, but the first defenders would be the service providers.

In the Belgian Civil Code[92] we can read that *the contract is law between the parties*. It means that the provider would be liable in case of no respect of the obligations he has promised to fulfil. To know exactly which these obligations are, there should be looked at the contract and would be determined whether or not the provider has an "obligation de moyens[93]" or an "obligation de résultat[94]". A "result obligation" would increase the liability.

Although, it is certain that in all circumstances the contract provisions would have to respect some imperative rules, such as the prohibition to insert abusive clauses.
Questions concerning the competent court and the applicable law should be solved respectively by the Brussels Convention of 1968 and the Rome Convention of 1980.

6.3.3.3. Controlled Access Services-2 (CAS-2)

Civil Air, Maritime and Rail Transport Companies would be the users of the CAS-2 safety-of-life services. The other CAS-2 services would principally have military applications.

The Transport Companies would be the first claimants for a failure in a CAS-2 service, but there could also be the transport users (secondary claimants) or, owners of fields or houses damaged by a train or aircraft crash (tertiary claimants).

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[92] Article 1134.

[93] general obligation of prudence and diligence. The debtor would not have to obtain a result, but he would have to apply his care and capacities so that he would only be liable if the creditor proves a failure in this obligation of prudence.

[94] Also called determined obligation. The debtor has to achieve a particular result so that he would be liable in all the situations within which this result is not obtained except if he proves that the damage comes from a "cause étrangère" that he could not envisage.

In addition to the ESA, EUROCONTROL, the EU, the European Commission and the Member States, the VC and the PMB would be liable in case of damage due to a CAS-2. They should be in charge of a safety case in order to be sure that all unavailability or wrong operation would be immediately detected.
Transport Companies could be liable for a lack in their safety management and for not having envisaged an alternative navigation mechanism when the Galileo system would be unavailable.

We will not approach the existing Air Civil, Maritime or Railway liabilities that are well summarised in the conclusion of the *Claim GNSS Report*. But we would highlight that, even if international or regional agreement are dealing with Transport liability issues, they are making a too complex patchwork to be easily applied. A reorganisation of those texts would be welcome.

6.4. CONCLUSION AND POLICY OPTIONS

The purpose of this chapter was not to make an exhaustive analysis of the subject, but rather to give some complements to the remarkable *Claim GNSS report* and to highlight some sensible points concerning the complex GNSS liability issue.

Galileo will play an important role in the transport field: a lot of positioning and navigation applications would be very useful to the different transport sectors. Depending of the need of accuracy and security, those services will be OAS, CAS-1 or CAS-2.
Concerning the damages that could occur, a difference has to be made between damage resulting from errors or failures of the basic signal or those caused by a badly provided value-added service. If in the last case we could maybe apply the liability framework of the Proposal for a Directive concerning electronic commerce, we would, in contrary, not find any applicable text dealing with the first kind of damages.

The ordinary law of the Member States should be applied in the case of damage resulting from errors or failures of the basic signal, but it would be a bad solution in this international context. Indeed, it seems that we are clearly facing a case of applicability of article 5 (ex-article 3 B) of the Treaty[95] establishing the European community[96]. A European sovereignty on Galileo and an European liability framework should be implemented, but all the GALILEO parties should be consulted before this, in order to consider the different liability principles.

We would conclude with the summary of some options that could be inserted into this framework in order to simplify the claimant's procedures.

- Military concerns have to be taken into account while implementing the liability framework. We do not think that the VC should have to be liable for military degradation of the signal.

- It would be useful to define clearly the nature of the GALILEO services in order to know, *inter alia*, if they could be considered as "Information Society services".

- It should be essential to determine exactly what is meant by OAS, CAS-1 and CAS-2, i.e. the exact service that must be provided (accuracy, corrections,...) and the information that has to be given to the user (accuracy, conditions of use of the receiver...).

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[95] See Jean-François LEROUGE, "Potential competence problems", Appendix C.

[96] " *in areas which do not fall within its exclusive competence, the Community shall take action, in accordance with the principle of subsidiarity, only if and in so far as the objectives of the proposed action cannot be sufficiently achieved by the Member States and can therefore, by reason of the scale or effects of the proposed action, be better achieved by the Community".*

- The Vehicle Company could become a central claim desk for all the damages due to the ground and space segments of GALILEO and would thereafter sue the concerned segment on the basis of a contract concluded between the VC and those segments.

- Another solution could be to create a claim desk that will dispatch the claimant to the concerned segment.

- The liability GALILEO framework could use the concept of *defect* of the Directive 85/374 concerning liability for defective products. There could be a displacement of the proof of a fault to a proof of a defect in the service that would not correspond to the "legitimate hopes" of the end user.

- The difference between normal and abnormal errors and the technical possibility to prove the existence of an abnormal error should be determined.

- Technical standards should be fixed concerning the receiver and the question of the technical possibility of making the difference between a receiver's defect and a signal's defect should be approached.

- The question of the need of a fund should be approached knowing that funds are generally created when there is an objective liability and risks of insolvency or when there are risks of really important damages (natural catastrophes, oil spills,...).

- It should be verified that safety-of-life transport entities have a well configured safety management and alternative navigation systems in case of disrupting of GALILEO .

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7. CONCLUSION

This report has the aim to study the most important legal issues encountered while integrating new technologies in transport systems. The questions developed in the present document were based on the analysis of different case studies[97] and concern four legal aspects of high interest in the transport field, i.e. privacy, electronic payments, competition and liability which are illustrated by case studies on road tolling, traffic information, electronic ticketing and the use of satellite based navigation systems.

In the field of privacy, some key points of the European Directive on the protection of personal data were analysed in relationship with the transport services such as the identity of the controller and the data subject's rights . It appears from the study that a particular attention should be paid in the future to the following issues. First of all, in the course of development of technical devices or at the moment of imposition of technical standards, the free consent of the data subject must be obtained. Further, processing for public interests reasons should only take place after weighing the public interests against the freedom of the citizen and reaching a proportionate balance. Processing of personal data for public interest reasons should be introduced by law and preferably by an Act of Parliament after democratic deliberation.

The analysis of the different case studies brought the conclusion that two electronic payment instruments were particularly used in the field of transport : the credit card and the reloadable payment (RI) instrument. Each instrument raises its own legal questions. When developing those questions, it appeared that some lacuna remain in the legal framework : the evidence of a transaction wherein the credit card number is used as a payment mean is difficult to bring, but the increase of the digital signature and certificate use could certainly be a solution to those uncertainties. Furthermore, in case of loss or theft of the payment instrument used without physical presentation or electronic identification and in case of countermanding of a payment order, some clarifications would be needed concerning liability. It is why a new legal instrument, e.g. a directive, clarifying those questions, would be of a great help. Concerning the reloadable payment instrument, the main questions relate to the interoperability and the protection of privacy when different types of information are stored on the same instrument.

In the transport sector, the integration of new technologies could deal with competition problems. The essential facilities doctrine, which was imported from the US anti-trust, has been developed recently in the EC competition law through a number of Commission decisions, namely in the field of transport[98], and was confirmed, though restrictively, by the Luxembourg Court in 1998. It is characterised by the analysis of two distinct but linked markets, the **upstream market** (infrastructure), which is generally a monopoly, and the **downstream market** (final good) which needs an access to the infrastructure. The goal of the essential facilities doctrine is to limit the negative welfare impact of the monopoly by limiting it to the upstream market, where it is inevitable. To prevent the holder of the essential facilities from using his monopoly power on the downstream market, the competition law imposes him to give access to his installations.
On each of the two markets, one condition is required to invoke the theory. On the upstream market, the installation has to be essential to gain access to the downstream market, i.e. there is neither an existing alternative, nor a potential alternative[99]. On the downstream market, the competition has to be

[97] See Annex I and II.
[98] In maritime transport, see: Comm., 11 June 1992 [1992] CMLR 255, not reported in the Official Journal; Comm., 21 dec. 1993, *Sea Containers/Stena Sealink* [1994] OJ L-15/8; Comm., 21 dec. 1993, *Port of Rodby* [1994] OJ L-55/52; in airline transport, see: Comm. , *London European/Sabena* [1988] OJ L-317/47; Comm., *British Midland/Aer Lingus* [1992] OJ L-96/34.
[99] This impossibility could be due to technical, financial or public interest reasons and could evolve with time. The test to evaluate if the establishment of a new installation is economically feasible should be based on the own characteristics of a fictive company having the *same markets shares* on the downstream market than the holder of the facilities.

absent or insignificant because, if it is in competition, there is no need of intervention. This condition will normally be fulfilled if the facility is actually essential and its access is refused.

This theory could be applicable in transport sectors. Concerning road tolling, for instance, if the new technologies themselves do not raise any competition problems because the market power of an undertaking does not derive so much of the control of the technologies than of the control of the road, they could lead to anti-competitive behaviour. The only way to be exempted of the antitrust law would then be to prove that one is not an undertaking[100] or to invoke the exception of article 86 §2 of the EC Treaty. In air transport, competition problems could be posed in three separated, but linked, markets: the airline services market, the CRS market and the tickets distribution market. As these markets are strongly related, the undertakings could use, and abuse of, their power on one market to increase their power on another market. Some of these conducts could be punished by the article 81 and 82 of the EC Treaty[101], but as these articles seem insufficient, the Council enacted a code of conduct[102][103] to regulate the behaviours of the CRS owners by imposing them certain obligations. Since this code is a Regulation, it is directly binding in the Community and all relevant contracts have to be brought in line with[104].

The contribution of a European satellite navigation system to the transport sector would be important and would probably increase with the time. GALILEO might be used in the road, aviation and maritime sectors for applications such as route guidance, traffic management, protection against car theft or logistic fleet management. Its success shall come from its adequate answer to the users expectations, i.e. *inter alia* a guaranteed security, availability and accuracy of the system, hence the need for a liability framework actually exists.
We realised that this framework could not only be based on existing Treaties or Directives as no text does tackle the case of damage resulting from errors or failures of the basic signal. The current solution for that problem would therefore be the application of the State Members' ordinary laws and their specific interpretation of the concept of fault. In the international context of Galileo, it should nevertheless be much more interesting to replace these States sovereignties by a European sovereignty. A Directive could, in those circumstances, give an overall answer to all the Galileo issues, including liability based on the central liability of the Vehicle Company and the Program Management Board. Due attention should nonetheless be paid to military concerns expressed by the defence forces of the Members that could short-circuit the implemented framework.

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[100] In *Höfner and Elser(*Case C-41/90, *Höfner and Elser/Macroton* [1991] ECR I-1979 para. 21), the Court of Justice defined an undertaking as "every entity engaged in an economic activity, regardless of the legal status of the entity and the way it is financed".
[101] Comm. 4 Nov 1988, *London European/Sabena* [1988] OJ L-317/47.
[102] Council Regulation 2299/89/EEC of 24 July 1989 on a code of conduct for computerised reservation systems [1989] OJ L-220/1 amended by Council Regulation 3089/93/CEE of 29 October 1993 [1993] OJ L-278/1 and by Council Regulation 323/1999/CE of 8 February 1999 [1999] OJ L-40/1.
[103] B. ADKINS, *Air Transport and EC Competition Law*, 1994, ch. 8; J. GOH, *European Air Transport Law and Competition*, 1997, ch. 11.
[104] *Explanatory Note of the Commission on the EEC code of Conduct for Computer Reservation Systems* [1990] OJ C-184/2.

8. APPENDIX A : ELECTRONIC PAYMENT INSTRUMENTS.

	Possible use in the transports	Payment instrument(s) well adapted to the function	Advantages	Disadvantages
Online payment per use	Road tolling Traffic information Park & ride Public transports	Normal smartcard Contactless smartcard	Rapidity of the payment Security The money is transferred online	Lack of interoperability
Fee paid globally before or after the provision of service	Road tolling Electronic ticketing Public transports	All payment instrument are adapted even the credit transfer order or the cheque because the payment is offline	More security of the payment	Possible slowness in the payment that depends on the good will of the client Need for a fee collection procedure
Payment made at the end of a period and proportionally to the use	Road tolling Electronic ticketing Public transports	All payment instrument are adapted even the credit transfer order or the cheque because the payment is offline	More security of the payment	Possible slowness in the payment that depends on the good will of the client Need for a performing tool to calculate the exact amount corresponding to the use Need for a fee collection procedure

9. APPENDIX B : ERRORS

We learned from the operation of the American GPS that the satellite signal does never reach the Earth without any change, without errors.

Today some errors are well known and can be easily corrected. Nonetheless they cannot always be corrected without a connection to another receiver and in real time. Keeping in mind this technical constraint, we cannot impose to the service providers to give a 100% correct position in real time in all the possible cases. Moreover, some corrections are depending of the machine itself. The cheaper you buy it, the more you risk to get errors. An example of this is the classical clock error : satellites are working with atomic clocks having a precision of 1 picosecond (1/1000.000.000.000 of a second) and receivers have often a clock precision of only 1 microsecond (1/1.000.000 of a second). As the system calculates the satellite's distance with the time send by it, it's evident that the clock's lack of precision will cause a distance error and at the same time a positioning error.

We would next have a summarised overview of some classical errors.

Blockage/masking

This incident occurs when the signal are prohibited in reaching the receiver antenna system, e.g. when travelling through a tunnel, in a dense forest, when indoors.

Receiver noise and multipath

Signals can be overwhelmed by noises. 'Noises' includes a certain number of perturbations that could affect the signals, such as interference that can occur when high electromagnetic conditions exists. Note nonetheless that some frequencies are better than others in this respect because they don't interfere as much[105]. Errors can also be caused by reflected signals near the receiver (that phenomenon is called multipath). Signals that do not determine the receiver's position - and that were destined to a near placed point - can bounce on surrounding buildings and be finally collected by the receiver.
Noises and multipath are normal errors, but they depend on factors that would not be controllable by GALILEO : they would depend on the performance of the receiver and the use conditions.

Equipment failures

The system can encounter hardware as well as software failures such as loss of power supply or software bugs.

Operator error

Damages can be caused by inadequate training, miss-keying, improper installation or use.

Intentional Jamming

As the first purpose of the GPS is military, the US Department of Defence (DoD) and the National Command Authority sometimes degrades the signal by an intentional jamming. Errors are automatically incorporated into the signal by altering the satellite's clock frequency and by transmitting incorrect position information. When the Selective Availability is on, the accuracy

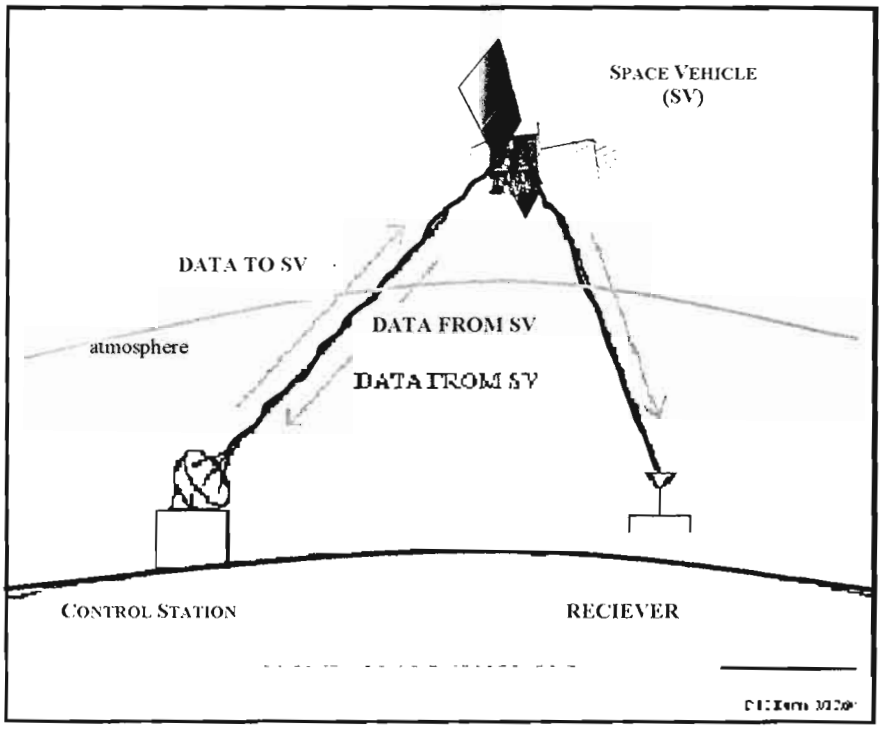
[105] The American military receiver is in this respect good, because it uses the best frequency : the Y code.

decreases from 160m to 300m. In Europe, a study reveals that the defence forces of the Member States, in times of war or crisis, would probably use this technique too.

atmospheric errors

The atmosphere alters the carrier waves passing trough it, but this can be corrected although the correction is only based on average conditions. Therefore an exact correction based on true conditions is impossible. Nevertheless, some receivers can be more precise by removing the ionospheric errors.

FIGURE I : Ground control corrections (clock and ephemeris[106] corrections)

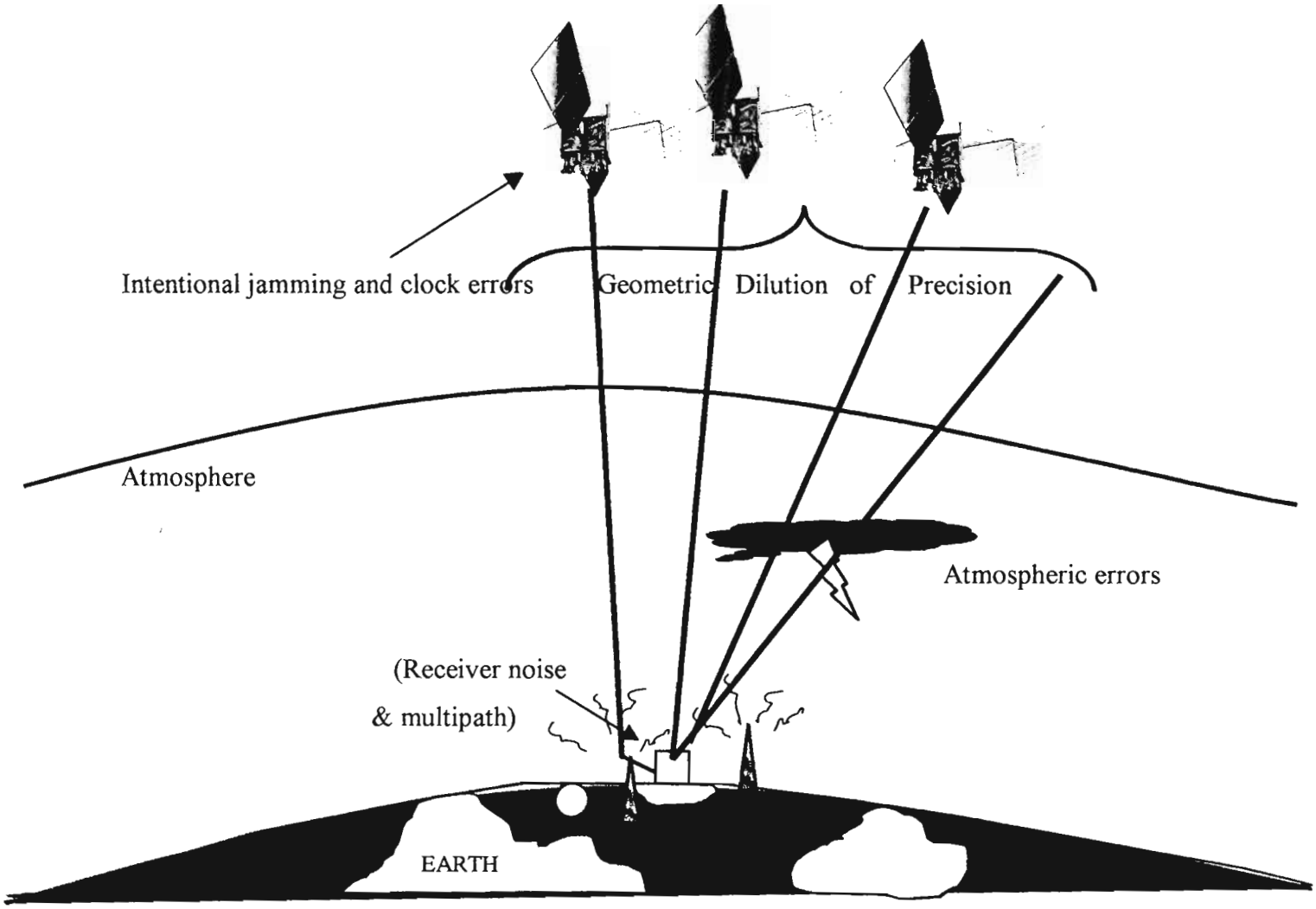


Clock errors

The satellites atomic clocks are updated from ground control stations but cannot maintain the exact time because of two perturbing parameters. First of all there is the influence of relativistic time delays and secondly, experiencing only six percent of the gravity on earth and moving twelve times as fast, an impossible[107] correcting is needed. By this problem, the clock may be changed by as much as 46 nanoseconds.

[106] Ephemeris errors are errors in the SV positioning data.
[107] In the American system, although a correction exists, it is based on a perfectly circular satellite's orbit and the real radius of the orbit can vary by 2 percent.

NORMAL ERRORS OVERVIEW



□ Real position

○ Position indicated by the receiver

FIGURE 2 : Simplified scheme of implications of GPS errors on localisation

Pirate jamming

Moreover there could be hostile signal jamming.

ATMOSPHERIC ERRORS

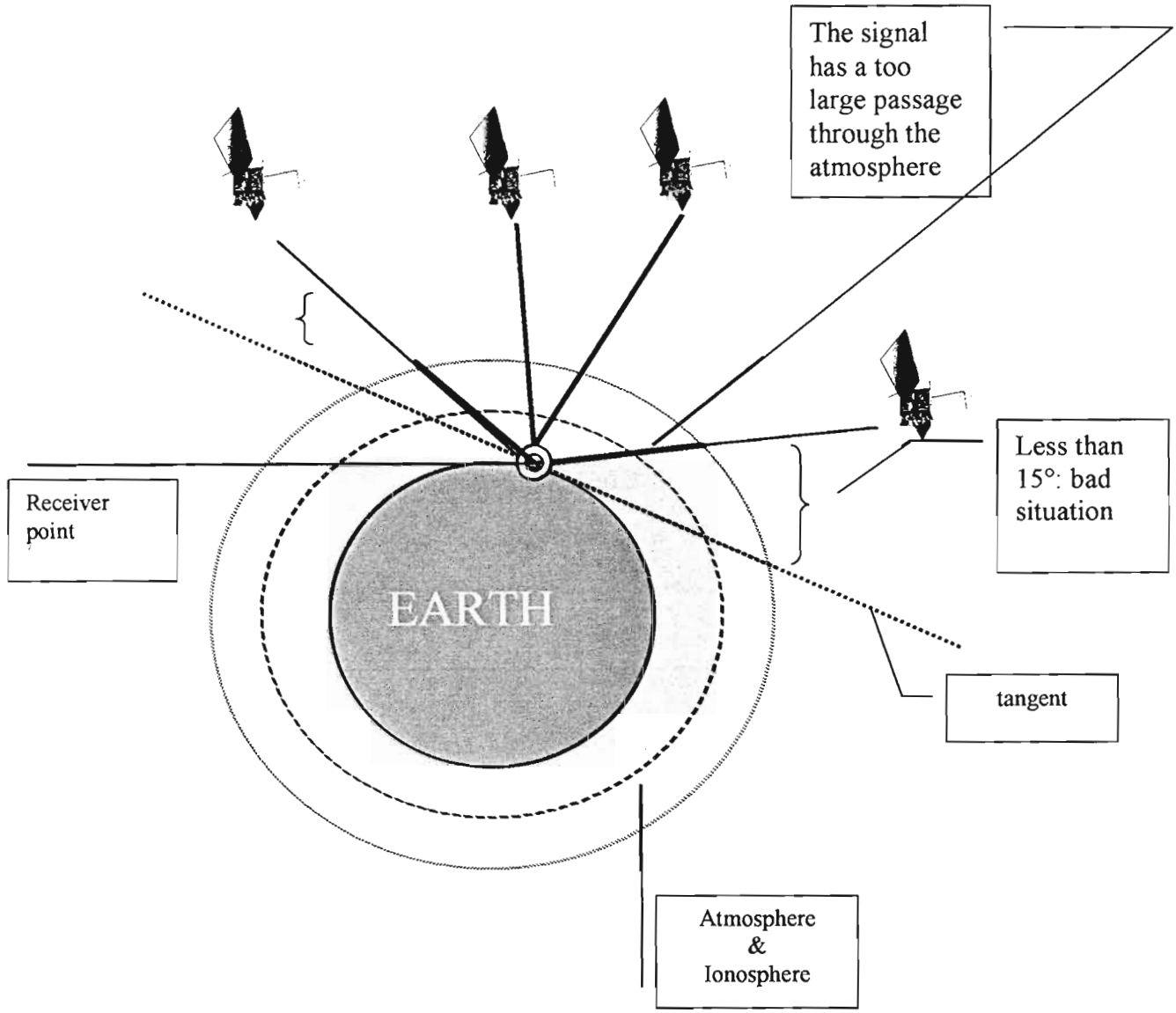


FIGURE III : geometric dilution of precision and atmospheric errors

Geometric Dilution of Precision

It's the a measure of the spread out of the used satellites. An insufficient spreading will decrease the precision[108]. Note that the opposite situation can generate errors too. The signal of a satellite located on a to low point compared with the tangent on the receiver's point should not be accepted. That signal is too much affected by atmospheric errors[109].

[108] See figure 2
[109] See figure 3

10. APPENDIX C: POTENTIAL COMPETENCE PROBLEMS

Jean-François LEROUGE
Researcher at the CRID

European Union has expressed its concern about the problem of mobility in its territory. Before entering in a policy aimed at promoting a legislative action, one can first wonder if it enters in its power to take such problem into consideration.

In the following lines, we have not as objective - and it is certainly not in our competence- to enter in a study devoted to EC competencies. We would like, by taking the example of road tolling, shortly examine by presenting a kind of methodology, whether or not the European Union may impose to its members, by the way of a directive, the installation and the use of a determined system. We would also like to remind applicable fundamental principles and point out potential problems.

The example of road tolling seems judicial to us since it is essential that the tolling systems should be interoperable between European countries for movement of goods, persons,.... In order to reach such a goal, it appears that the European union is best placed to adopt a legislation.

The following questions will be briefly debated in this chapter. Would a EC action be conform with the principle set up by article 5 of the treaty ? Does its action generate a problem with regard to the principles of subsidiarity and proportionality ?

10.1. THE COMPETENCE OF THE EUROPEAN UNION : REMINDER OF THE PRINCIPLES

In order to be legal, an action of the European union must conform with the principle set up by article 5 (ex-article 3 B) of the treaty establishing the European community. Let us begin by reminding the wording of this article:

The Community shall act within the limits of the powers conferred upon it by this Treaty and of the objectives assigned to it therein.

In areas which do not fall within its exclusive competence, the Community shall take action, in accordance with the principle of subsidiarity, only if and in so far as the objectives of the proposed action cannot be sufficiently achieved by the Member States and can therefore, by reason of the scale or effects of the proposed action, be better achieved by the Community.

Any action by the Community shall not go beyond what is necessary to achieve the objectives of this Treaty.

The first question that immediately comes up is to know whether or not the European Union is competent to undertake an action in the field of the tolling system and to examine the kind of such competence (exclusive or not).

In order to know if the Community is competent, one has to see whether the objective of the foreseen action explicitly or implicitly complies with the actions defined in articles 3 and 4 (ex article 3A) of the Treaty and specified by a section of the Treaty or, subsidiary, if the action is needed to reach the general goal given to the Community by article 2[110] . It has always been recognised that the Community has only competence within the limited areas in which it has been given power and the

[110] K. LEENAERTS and P. VAN YPERSELE: "Le principe de subsidiarité et son contexte", *C.D.U.*, 1994, p.36 and f.

principle appears to be evident: without a legal basis, no community action[111]. In the field of transport this should not cause any problem.

However, when checking the competence of the Community, one is confronted with an even more complex problem: to identify if the competence of the Community is exclusive or not. This second point is particularly important because, following article 5, it will affect the obligation to conform to the principle of *subsidiarity*. Article 5 is indeed explicit about the fact that subsidiarity will only fall to be considered with respect to areas which do not fall within the exclusive competence of the Community. If an area is within the Community's exclusive competence then there is no legal obligation to apply the subsidiary concept[112]. Unfortunately, it seems that nobody specifically knows what an exclusive competence really is and there is no criterion for distinguishing between those areas which are, and those which are not, within the Community's exclusive competence.

Our next point will examine, with the help of some authors' point of view and the Commission's, if the field of transport may fall in the framework of the exclusive competences of the Community.

10.2. THE TRANPORT FIELD, AN EXCLUSIVE COMPETENCE OF THE EU?

As explained earlier, the notion of exclusive competence is rather obscure. It is not our aim to comment such notion. However, we have to know whether or not the action of the Community needs to be clarified with regard to the principle of subsidiarity.

As Mr. Bribosia points out[113], most of the competences of the Community are shared competences. The member states keep their competences as long as the European community has not acted. According to him[114], some competences are however admitted as "natural" exclusive competence (by opposition to competences exclusive by exercise): the Common Commercial Policy and the conservation of fisheries in the framework of the Common fisheries Policy. For Leenaerts and Van Ypersele[115] only the natural exclusive competence may be outside the scope of the principle of subsidiarity. These authors clearly defend the idea of the largest possible application of the principle of subsidiarity.

An intermediary position may be found in the work of Steiner[116]. For him, one is forced to the conclusion that the only areas in which the Community has exclusive competence for the purpose of Article 3b are those in which it has already legislated. If one follows this point of view, the subsidiarity principle will be excluded where the Community has an exclusive competence.

The Commission has also developed its own opinion. It has taken the view that an area falls within the exclusive competence of the Community if the Treaties impose on the Community a duty to act, in the sense that it has sole responsibility for the performance of a particular task. The Commission argues that there is a 'block' of exclusive powers which are joined by the thread of the internal market,

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111 See for example the case of June 16, 1993, *France/Commission*, C-325/91, *J.T.D.E.*, p.38 : *any act to create law must be founded by a disposition of Communautary law that must expressily be referred as legal basis (...).*

112 For studies on the concept of subsidiarity, see for example, P.CRAIG and G. de BÚRCA, *EC Law, Text, cases, & materials,* Oxford, Clarendon Press, 1995, p.113, M-A. GAUDISSART, "La subsidiarité, facteur de désintégration européenne ?", *J.T.*, 1993, p. 176, Y. LEJEUNE (sous la direction de), *Le traité d'Amsterdam; espoirs et déceptions,* Collection de l'Institut d'études européennes de l'université Catholique de Louvain, Bruylant, Bruxelles, 1998, p. 30, Commission report to the European Council, *Better lawmaking 1998, a shared responsibility,* available on http: //europa.eu.int.

113 H. BRIBOSIA, "De la subsidiarité à la coopération renforcée", in *Le traité d'Amsterdam; espoirs et déception, op.cit.*, p.31.

114 The author justifies his reasoning by decisions of the Court of justice, such as case Bulk Oil, February 18, 1986, 1974/84, Rec., p.559.

115 K. LEENAERTS and P. VAN YPERSELE, *op.cit.*,p.28.

116 J. STEINER, cited by P.CRAIG and G. DE BÚRCA, *op.cit.*, p.115.

including: free movement of goods, persons, services, and capital; the Common Commercial Policy; competition, the Common Agricultural Policy (CAP); the conservation of fisheries and ***transport policy***[117]. In the field of transport, the Commission justifies its opinion with the fact that the authors of the treaty have foreseen specific obligations to act since 1957. A.G. Toth seems to agree with the Commission with his argument that subsidiarity can not apply to any matter covered by the original EEC treaty[118].

Following those last interpretations hereabove, the Community seems to appear competent to impose any measure for the purpose of increasing mobility in the transport field without having to respect the principle of subsidiarity. Indeed, the activities of the Community have included since 1957 an internal market characterised by the abolition, as between Member States, of obstacles to the free movement of goods, persons, services and capital; a common policy in the sphere of transport, the approximation of the laws of Member States to the extent required for the functioning of the common market. More precisely, the Treaty has always granted to the community the right to act, for the purpose of a common policy, common rules applicable to international transport, measures to improve transport safety and *any other appropriate provisions.* It could so be concluded that the community has a real exclusive competence to adopt a directive aiming at improving the mobility and singularly fixing certain standard criterion for achieving to an interoperability between the tolling systems. In our opinion, its competence (also justified by the necessity to abolish obstacles to the free movement of persons) could go as far as imposing to members states to build up more car-parks and to develop technologies to make those car-parks as accessible and efficient as possible[119]. The community should however always act in the respect of the principle of proportionality[120].

The clash of opinions between the Commission and the authors leads us however to adopt a careful attitude and to recommend the community to justify the directive it would like to adopt with regard to the principle of subsidiarity. In order to achieve such objective, the following point will give to the reader a brief outline of the principle of subsidiarity. Our last point will be devoted to a brief analysis with regard to the motivation of such principle if a community action is undertaken.

10.3. THE PRINCIPLE OF SUBSIDIARITY

Outside the fields that are in the scope of its exclusive competence, the community shall, following the principle of article 5, act only if the members states are inapt to contribute to the realisation of the action's objectives[121]. If the action can better be achieved by the community because of the scale or the effects of the proposed measures, then the community will be authorised to impose its action without any limit. When the members states are not able to contribute sufficiently to the realisation of such objectives, then the community shall help or impose them to do what they are able to do and shall do itself what they can not do. Thus, in all cases, the community shall demonstrate the merits of its action compared to the actions that the member states are taking or may take. Thus the Community has a duty of comparison between the objectives it pursues and the objectives of the members states. In this approach, the community shall take into consideration the transnational dimension of the subject and the possible consequences of the inaction of the community. The final objective of the subsidiarity is a taking of decisions at the most appropriate level[122].

In application of those principles, it is recommended that any explanatory memorandum accompanying the legislation should involve at least the following points :

- The definition of an objective;

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117 Le principe de subsidiarité, *Bull. CE*, 10- 1992, p.127.
118 For more details see P.CRAIG and G. DE BÚRCA, *op.cit.*, p.114.
119 See our next section: the optimising of the traffic for a given demand.
120 See our next point the criteria of intensity.
121 K. LEENAERTS and P. VAN YPERSELE, *op.cit.*, p.62.
122 M-A. GAUDISSART, *op.cit.*, p.177.

- An explanation of the reasons why those objectives could not be sufficiently reached by the members states;
- A demonstration of the aptitude of the community to reach such objectives and the reason why they can better be reached by it;
- A demonstration of the extent of its action with regard to the capacity of each member states to reach the objectives of the action.

After demonstrating the necessity to undertake an action at the community level, the community shall also check, in accordance with article 5 paragraph 3, if the undertaken action is not in disproportion compared with the effect researched or the result obtained. Article 5 § 3 is just a consecration of the well-known principle of proportionality also applicable for the exclusive competence. Thereto, the most appropriate instrument should be used to achieve the goal researched and the community should only act for what is necessary to reach its objective.

10.4. IMPOSING A EUROPEAN TOLLING SYSTEM BY A DIRECTIVE: A GOAL IN CONFORMITY WITH THE PRINCIPLE OF SUBSIDIARITY ?

Let us now see if an action of the community to impose to member states a kind of tolling system and legal requirements to comply with would be in conformity with the principle of subsidiarity.

Some member states have already adopted a tolling system. Others, such as England[123], intend to install one. But member states are confronted with the problem of mobility. The objective consists in promoting an automatic system in order to avoid traffic congestion where user will have to pay. Any system may in the future have to comply with some European requirements established by a future legislation for tarification[124]. An amount of reasons plead for an automatic tolling system using common technical features to permit the driver to use the same system in any country, to facilitate a better mobility inside Europe and avoid new obstacles to a fluid traffic within Europe.

It appears thus that the community is best placed to legislate fixing common criteria for the infrastructure to be adopted by the member states who have or wish to have a system of road pricing and condition for issuing payment system for tolling purpose and organising the clearing. Without any action of the EC, the realisation of a perfect interoperability between systems appears to be like a dream. The compliance of an EC legislation in such field with the principle of subsidiarity seems to us easy to demonstrate[125].

On the other hand, we think *a priori* more difficult for the EC to go further by imposing precise requirement to be followed for the purpose of improving the mobility inside cities. It seems that the Community should only fix some objectives to reach in order to warrant a minimum of mobility everywhere in Europe (i.e.: having an efficient public means of transport and promoting its use,...). Following that, we do not think that the community could impose to the member states to adopt parking systems reservation and legislate in this area except for other purpose than a purely transport one (i.e. legislate for fixing minimum criterion that operators of parking reservation systems must respect in order to protect consumers) although interoperable equipment may also be used in rural

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123 Newspaper *Le soir,* April 15, 1999, p.5. In Belgium, a system of road pricing has been judged not recommendable for the moment. However, the federal state has been encouraged, following the necessity of developing an interoperable system at an international level, to carefully follow the technological development in such matter and the experiences in the other countries (see Report of the University of Liege, UFSIA and CIRIEC, "Etude préparatoire à la définition d'un plan fédéral de mobilité durable, note d'orientations, novembre 1998, p.27.

124 The idea often cited is to establish a system of "grilles tarifaires". See Communication de la Commission: "Interopérabilité des systèmes de péages en Europe", Com (1998), 795, final.

125 The necessity to achieve to a perfect interoperability has already been largely demonstrated by the Commission. See Communication de la Commission, *op.cit.*

areas. In such a case states members seems to be best placed to adopt measures to use new technologies.

10.5. CONCLUSION

The obligation to comply with the principle of subsidiarity will depend on the nature of the competence of the European Community (exclusive or not). However, we have seen that the notion of "exclusive competence" is rather obscure. Therefore, it creates doubt about the obligation to comply with the subsidiarity principle. A brief study of such principle demonstrated nevertheless that an action of the EC could easily be undertaken in the transport field at the condition of a good motivation with regard of points that need to be included in the explanatory memorandum.

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